MINISTRY OF NATURAL RESOURCES

Lindsay District

LAND USE GUIDELINES

Ontario

Ministry of
Natural
Resources

Hon. Alan W. Pope
Minister

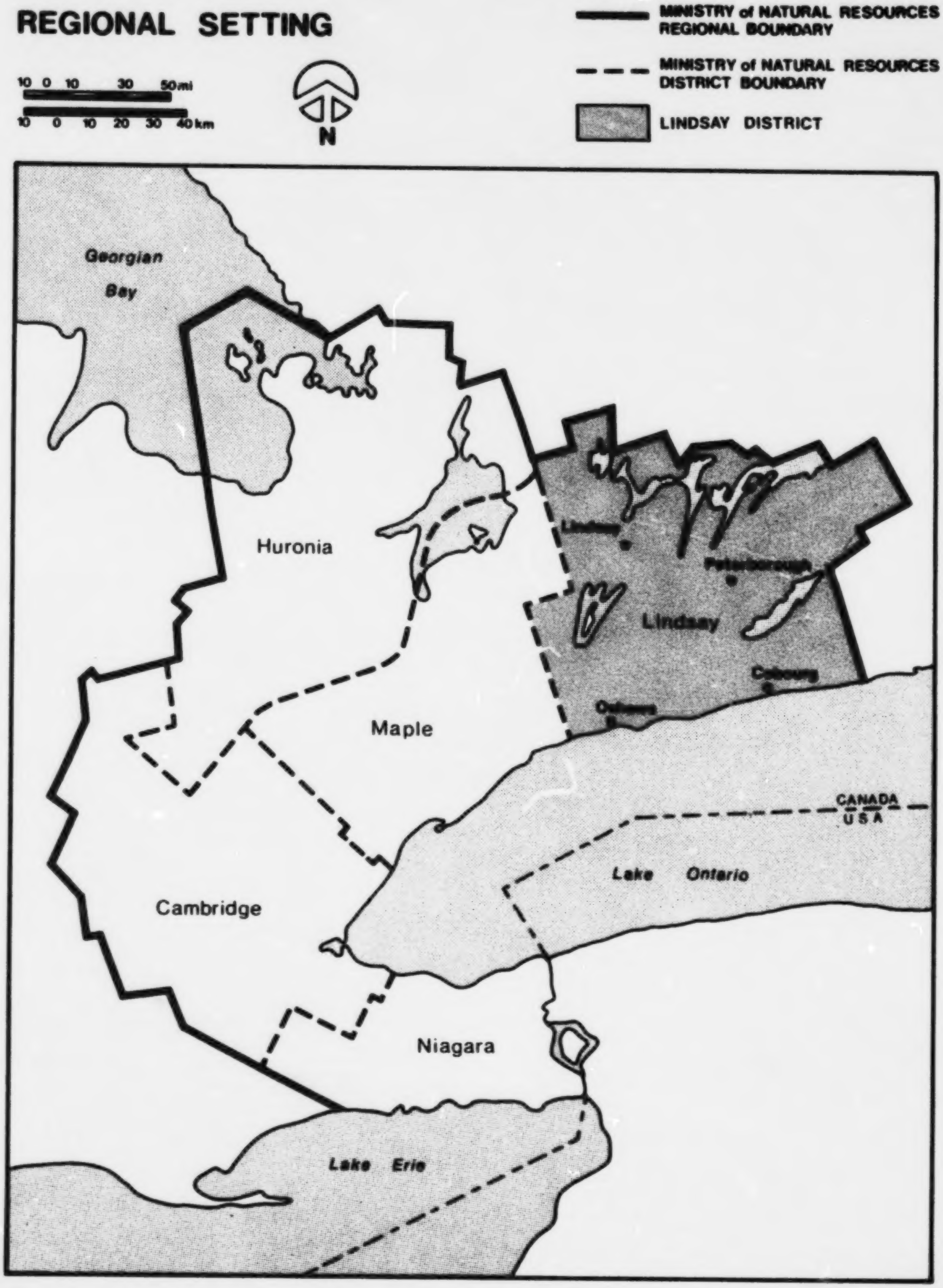
W. T. Foster
Deputy Minister

1983

Map 1

LINDSAY DISTRICT

REGIONAL SETTING


LEGEND
MINISTRY of NATURAL RESOURCES REGIONAL BOUNDARY
MINISTRY of NATURAL RESOURCES DISTRICT BOUNDARY
LINDSAY DISTRICT
10 0 10 30 50mi
10 0 10 20 30 40km
N
Georgian Bay
Huronia
Maple
Cambridge
Niagara
Lindsay
Peterborough
Cobourg
Oshawa
CANADA
USA
Lake Ontario
Lake Erie

FOREWORD

The Ministry of Natural Resources has a primary responsibility for the management of the province's natural resources, in particular those related to resource development and outdoor recreation.

This document will serve as a design for integrated resource development in the Lindsay District. It is also intended to provide others with an understanding of the ministry's mandate and its programs which rely on both Crown and private lands for success.

To ensure an integrated approach the *Lindsay District Land Use Guidelines* identify where and in what manner the ministry may use Crown land, and to what extent it may wish to suggest uses of private land, in working towards the achievement of ministry objectives.

For Crown land the ministry must consider the land and water requirements for both its own programs and those of other government agencies. This will require ongoing liaison with these other agencies. The ministry will continue to consult with private landowners and local municipalities since the latter have the responsibility for control of private land use.

The program targets and approaches outlined in this document follow the overall direction outlined in the ministry's *Southern Ontario Co-ordinated Program Strategy*. The *Land Use Guidelines* may serve as one of the sources of information for ministry involvement in the planning process of municipalities and other agencies. It is recognized, however, that this document has no legal status.

Planning is a continuous process and must be responsive to changing needs, information and technology. Thus the targets and strategies presented in this document are subject to revision based on such factors as changes in government policy, new or refined resource information, and significant changes to land use in other planning documents. To accommodate changes the *Land Use Guidelines* will normally be reviewed every ten years and will involve full public consultation.

Comments may be addressed to the District Manager at any time.

Michele Fordyce

Regional Director
Central Region

District Manager
Lindsay District

contents

FOREWORD v
CONTENTS vii
MAPS AND TABLES viii

I INTRODUCTION 1

II GENERAL POLICIES 5
A: integrated resource management 5
B: public safety 6
C: environment 7
D: energy 7

III SPECIFIC POLICIES 9
A: forestry 9
B: mineral aggregate 15
C: minerals and fossil fuels 22
D: fisheries 26
E: wildlife 33
F: provincial parks 39
G: general recreation 47
H: land administration 49

IV APPLICATION 53

APPENDIX

A: highlights of public consultation 60

GLOSSARY 63

maps

1 Regional Setting iii

2 Forestry 13

3 Mineral Aggregate 19

4 Minerals and Fossil Fuels 23

5 Fisheries 29

6 Wildlife 35

7 Provincial Parks and General Recreation 43

8 General Resource Areas back pocket

tables

1 Lindsay District Contribution to Southern Ontario Targets 3

2 Summary of Forestry Lands 11

3 Timber Production Target Summary 11

4 Summary of Mineral Aggregate Targets 17

5 Breakdown of Potential Sport Fish Production 27

6 Summary of Fisheries Targets 27

7 Summary of Wildlife Targets 34

8 Significant Areas of Natural and Scientific Interest—Earth Science 41

9 Significant Areas of Natural and Scientific Interest—Life Science 42

10 Representation Achievement—Waterway and Natural Environment Class Parks 42

11 Provincial Parks' Targets for Recreation 45

12 Existing Provincial Parks 45

13 Planning Hierarchy of the Ministry of Natural Resources 54

14 Summary of Contacts 61

15 Summary of Responses 62

I INTRODUCTION

The Ministry of Natural Resources is concerned with the management of land, water, trees, fish, wildlife and minerals for protection, recreation and production. Most of these resources occur in rural areas on both public and private land. Because most of the land in southern Ontario is privately owned, much of the ministry's management is carried out in conjunction with municipalities, other agencies and private land owners.

The *Lindsay District Land Use Guidelines* will be the basis for resource management and natural resource planning in Lindsay District. It summarizes the ministry's objectives, the accepted district targets, general and program strategies, and the means of applying the document. Program objectives and targets follow the overall direction outlined in the ministry's *Southern Ontario Co-ordinated Program Strategy.*

The maps in this report reflect the policies which are outlined. Because of scale limitations, these maps have been generalized from more detailed maps and are intended to provide a summary of the ministry's interests in the resource base. For more detailed information, maps at a scale of 1:50,000 are available in the district office for review.

The ministry has five major operating divisions: Forests, Mineral Resources, Fish and Wildlife, Parks and Recreation, and Lands and Waters, each carrying out projects relating to its program. The ministry endeavours to integrate its programs to efficiently achieve its objectives. The ministry also wants its programs to be compatible as far as possible with the wishes of private landowners and municipal governments.

In southern Ontario, the ministry is decentralized both geographically and administratively to four regions (Central, Eastern, Algonquin and Southwestern) and 21 districts. The Lindsay District is one of five administrative districts in the Central Region (Map 1). The district covers an area of 6,856 square kilometres (excluding part of Lake Ontario), and includes 41 municipalities within the southern portions of the Counties of Peterborough and Victoria, the western section of the County of Northumberland, and the eastern section of the Regional Municipality of Durham. The district is bounded to the west by the Maple District, to the north by the Minden and Bancroft Districts (Algonquin Region), to the east by Napanee and Tweed Districts (Eastern Region) and to the south by the international boundary in Lake Ontario. The larger urban areas include the Cities of Peterborough and Oshawa, and the Towns of Whitby, Newcastle, Lindsay, Cobourg and Port Hope.

Most of the land in Lindsay District is privately owned or is controlled by other agencies, where the ministry's authority is limited to the enforcement of certain Acts, or to carrying out of management with the owner's consent.

The ministry recognizes that the planning control of private lands in municipalities is exercised by those municipalities under the authority of the *Planning Act* administered by the Ministry of Municipal Affairs and Housing. The document does, however, outline many of the ministry's preferences for land use and resource management on private land, and describes a framework for decision-making internally within the ministry. Implementation of ministry programs on private land will continue to be primarily by education, and through various forms of incentives. The ministry has, however, the management role on lands owned by the Crown.

The ministry recognizes that private landowners, other government agencies, municipalities, conservation authorities, and interest groups are key partners in any effort to achieve effective and co-ordinated resource management. The ministry will continue to work with these groups, especially with municipalities through the ministry's plan input and review program to ensure that resource values are considered in local planning documents.

There will be instances when the ministry and others, for example another government agency, will have different intentions for the same area. When such situations are identified the ministry will enter into negotiations to arrive at an acceptable solution.

The way in which the ministry will work with municipalities, conservation authorities, and others (for example, the Canada-Ontario Rideau, Trent-Severn Agreement Board and the Ontario Ministry of Agriculture and Food) is outlined in the application section of this report.

Background information for the *Lindsay District Land Use Guidelines* was collected over a three year period, 1977-1980. During this time, all ministry programs mapped resource information, and identified potential conflicts to resource management, overlapping program concerns, and supportive programs. Areas of high potential for the achievement of objectives and targets were identified for each program.

Targets for the Lindsay District were derived from the *Southern Ontario Co-ordinated Program Strategy* which established targets for various natural resource products on a southern Ontario basis. These targets were then allocated to the ministry's regions and districts according to the history of production and potential resources in each area. The district targets have been revised several times based on new information, and further target testing and evaluation. Table 1 outlines Lindsay District's contribution to the achievement of southern Ontario and regional targets.

In southern Ontario, public involvement in ministry planning began with the development of the *Southern Ontario Co-ordinated Program Strategy.*

Public consultation in the preparation of the *Lindsay District Land Use Guidelines* began with the holding of open houses in June, 1982. The background information open houses were held to provide the general public with an overview of the ministry's role and responsibilities, and a perspective to assist in the review of the draft *Lindsay District Land Use Strategy*[1] which was nearing completion.

In July, 1982 a draft *Lindsay District Land Use Strategy* was released and in August additional open houses were held to explain the direction proposed in the *Strategy* and invite public comment. In addition to receiving many verbal and written comments as a result of the open houses, the ministry held follow-up meetings with municipalities at their request.

Based on the analysis and evaluation of all the public input received, this document was prepared.

Copies of all comments received are available for viewing in the Lindsay District office, the ministry's main office public reading room and the Legislative Library at Queen's Park. Details of the public consultation program are found in an appendix to this report.

This document outlines how the ministry hopes to achieve its targets in Lindsay District. The benefit of using targets is that they provide a measurable indication of the degree of achievement of certain ministry program policies.

It is not intended that all targets be achieved immediately. The intent is to aim for target achievement over the next 20 to 40 years. However, a number of factors may affect achievement of the stated targets including:

- validity of the original assumptions on which the target was based;
- Legislative approval of necessary funding and staffing required to carry out the level of resource management on which target achievement was based;
- changing economic and social conditions on a local or provincial basis;
- new or improved resource information which could result in a change of the original estimates; and
- a more thorough analysis of original information.

Where there are changes in targets, whether for the above or other reasons, the document will be amended accordingly.

This document is best viewed as a working guideline which will be subject to review and re-evaluation.

---

*(1) **Lindsay District Land Use Strategy** was the former name of the **Lindsay District Land Use Guidelines***

TABLE 1 LINDSAY DISTRICT CONTRIBUTION TO SOUTHERN ONTARIO TARGETS

Program	District Target(1)	Central Region Target(1)	Southern Ontario Target
Forestry	212,250 m³/yr to year 2020 (3.6%)	700,000 m³/yr to year 2020 (11.9%)	5,900,000 m³/yr to year 2020
Mineral Resources (Aggregates)	252,000,000 tonnes by year 2000 (cumulative) (9.5%)	1,647 million tonnes by year 2000 (62.3%)	2,644 million tonnes by year 2000
Fish — Commercial	36,290 kg/yr to year 2000 (0.25%)	390,000 kg/yr to year 2000 (2.7%)	14,500,000 kg/yr to year 2000
— Sport	3,400,000 opportunities/yr to year 2000 (11.3%)	9,500,000 opportunities/yr to year 2000 (31.7%)	30,000,000 opportunities/yr to year 2000
— Bait	60,000 dozen/yr (0.9%)	3,620,000 dozen/yr (53.2%)	6,800,000 dozen/yr
Wildlife — Fur Harvest	31,900 pelts/yr to year 2000 (4.9%)	125,000 pelts/yr to year 2000 (19.2%)	650,000 pelts/yr to year 2000
— All Hunting	169,000 opportunities/yr to year 2000 (5.8%)	686,000 opportunities/yr to year 2000 (23.7%)	2,900,000 opportunities/yr to year 2000
— Big Game	18,700 opportunities/yr to year 2000 (3.7%)	65,000 opportunities/yr to year 2000 (13%)	500,000 opportunities/yr to year 2000
— Small Game	105,600 opportunities/yr to year 2000 (6.6%)	442,000 opportunities/yr to year 2000 (27.6%)	1,600,000 opportunities/yr to year 2000
— Waterfowl	44,700 opportunities/yr to year 2000 (5.6%)	179,000 opportunities/yr to year 2000 (22.4%)	800,000 opportunities/yr to year 2000
Parks — Day Use	686,000 swimming opportunities/yr to year 2000 (4.5%) 612,500 picnicking opportunities/yr (7.0%)	5,913,000 swimming opportunities/yr to year 2000 (39.2%) 3,768,000 picnicking opportunities/yr (43%)	15,095,000 swimming opportunities/yr. to year 2000 8,758,000 picnicking opportunities/yr to year 2000
— Extended Use	440,100 camping opportunities/yr (8.0%)	1,248,000 camping opportunities/yr (22.7%)	5,496,000 camping opportunities/yr to year 2000
— Protection	to protect provincially significant earth and life science features which contribute to the representation of the 35 geological environments, and each vegetation site type in the 26 site districts, in southern Ontario	Same as district target	same as district target
	to protect provincially significant landscape related prehistorical and historical resources which contribute to representation of the 14 themes of southern Ontario's history	same as district target	same as district target
— Heritage Appreciation	to provide opportunities for exploration and appreciation of the outdoor natural and cultural heritage of Lindsay District.	same as southern Ontario target	to maximize opportunities for unstructured individual exploration and appreciation of the outdoor natural and cultural heritage of southern Ontario, through the provision of a wide variety of interpretive and educational programs.

(1) Figures in brackets after District and Regional Targets represent the percentage share of the Southern Ontario Target.

II GENERAL POLICIES

Direction for ministry activities in Lindsay District is provided in two chapters: General Policies, and Specific Policies. The general policies, which are outlined in the following chapter, deal with integrated resource management, public safety, the environment, and energy. These policies apply to all ministry programs. Specific policies, which are presented in Chapter III, provide additional direction to individual ministry programs. The contribution which each program will make to the application of the general policies is elaborated on in the Specific Policies chapter.

A: integrated resource management

1. POLICY STATEMENT

Programs will be integrated to ensure the efficient use of land and water to achieve ministry objectives.

2. DISCUSSION

The area of land and water in Lindsay District that is suitable and available for achievement of ministry objectives and targets is limited. The ministry itself manages only about two percent of the land in the district, including small parcels of Crown land in the northern part of the district, the provincial parks, acquired lands, and agreement forests owned by municipalities and conservation authorities. The great majority of land in the district is privately owned. This, along with other constraints, requires that many resource management activities must be carried out with the cooperation of landowners.

Integrated resource management focuses on the co-ordination of two or more resource management programs for a particular area to ensure minimal conflicts and beneficial management for participating programs. This also requires the co-ordination of resource management efforts with other land uses such as agriculture and residential development to avoid conflicts and inefficiencies in land use. The aim then, is to promote the efficient use of land to achieve ministry objectives. While this approach will have particular emphasis on public lands, it will also be encouraged on private lands to optimize natural resource management.

3. STRATEGY

- apply the concept of multiple use to land and water resource management. This means that the ministry will normally undertake two or more compatible activities on the same areas concurrently or sequentially over time; and, recognize that, in some circumstances, management of areas for a single purpose such as extraction, protection or recreation is necessary;
- ensure that each program contributes to the extent possible, to the achievement of other program objectives. Individual area management plans will be directed to achieving as many ministry objectives as possible to ensure

integrated management and increased efficiency;

- permit interim use of candidate parks, providing park values are protected. Uses and facilities which complement the achievement of park objectives will be encouraged; uses which have no significant negative impact on the long term achievement of park objectives will be permitted with judicious controls; and, uses which would conflict with the long term achievement of park objectives will be prohibited; and
- apply the resource management integration guidelines outlined in each program section.

B: public safety

1. POLICY STATEMENT

The ministry will seek to eliminate loss of life and to minimize property damage and community disruption resulting from floods, erosion, earth slippage and forest fires.

The ministry will seek to eliminate injury and loss of life from hazards around abandoned pits, quarries and mine shafts and from abandoned oil and gas wells.

The ministry will promote the safe pursuit of outdoor recreation and resource production activities.

2. DISCUSSION

In Lindsay District, public safety concerns related to flooding, erosion and earth slippage are dealt with in cooperation with the conservation authorities. Through plan input and review the district attempts to ensure that development avoids areas susceptible to these hazards, or occurs only with adequate protection and safeguards. Other actions that the ministry takes include participating in contingency planning and cooperating with conservation authorities and other agencies in the identification of floodplains and other hazardous sites in developed and developing areas.

The ministry's actions regarding flood hazards are guided by the provincial flood plain management policy.

The Ministry of Natural Resources has responsibility for forest fire management in Ontario. This responsibility is shared with municipalities and with landowners and resource users.

The fire management program of the ministry performs a support function that provides expert knowledge and specialized services in matters of fire control and fire use to groups within and outside the ministry. These services relate to preventing the occurrence of wildfires and controlling those wildfires that threaten values.

In Lindsay District, forest fire protection services are normally provided by municipal agencies. The ministry can play a significant role in developing municipal expertise in minimizing risks from forest fires and in emergency planning.

3. STRATEGY

The strategy for the achievement of the public safety policy statement is discussed in the strategy section for each program.

C: environment

1. POLICY STATEMENT

The ministry will conduct its activities in an environmentally responsible manner.

2. DISCUSSION

All programs of the ministry share in the responsible management of natural resources. This involves managing renewable resources on a biologically sound basis, and managing non-renewable resources to meet current demands, giving attention to anticipated future needs. Where environmental impacts are inevitable, mitigating measures and/or rehabilitation are used.

All programs contribute to achieving the broad objective of identifying and conserving unique, representative or endangered physical, biological, cultural and historical features of the province.

The ministry is very concerned about the potential impact of acid rain on Ontario's resources. Although it is believed that acid rain will have a relatively small effect on fisheries in the Lindsay District, the ministry does have concerns with respect to the possible effects of acid rain on vegetation. The ministry will work closely with other government agencies to monitor the effect of contaminants such as acid rain on natural resources.

The ministry is also concerned about wetlands in Ontario. In 1981, the ministry released a discussion paper, "Towards a Wetlands Policy for Ontario," to provide a basis for public discussion and to solicit public response. The ministry will be issuing a specific wetlands policy in the near future.

As a general strategy for wetlands in Lindsay District, the ministry will encourage consideration of all wetland values in municipal planning and the planning of other agencies.

3. STRATEGY

The strategy for the achievement of the environment policy statement is discussed in the program strategy sections.

D: energy

1. POLICY STATEMENT

The ministry will undertake its activities so as to contribute to provincial energy objectives.

2. DISCUSSION

Ontario is committed to a major effort to increase its energy self-sufficiency. The district's major contribution will be the encouragement of fuelwood harvest as a part of good forest management. The ministry also has a role to play in areas such as energy conservation and solar water heating demonstration projects.

3. STRATEGY

The strategy for the achievement of the energy policy statement is discussed in the program strategy sections.

III SPECIFIC POLICIES

Chapter III outlines:

- Specific objectives and targets.
  The specific objectives are broad statements outlining the general direction for each program. These originate from the *Co-ordinated Program Strategy for Southern Ontario.*

  Targets were allocated to the Lindsay District from the Central Region's portion of the *Co-ordinated Program Strategy* targets for southern Ontario.

- Program resource analysis.
  The resource analysis provides an assessment of the feasibility of target achievement. It also outlines information such as current production of resources or services, and any limitations to achieving targets.

- Program strategy.
  The program strategy outlines: (i) the program's contribution to the general policies, discussed in Chapter II, (ii) important resource areas within the Lindsay District, and (iii) strategies that identify guidelines and priorities for the achievement of objectives and targets.

A: forestry

1. OBJECTIVE

The objective for forestry in southern Ontario is to provide for an optimum contribution to the economy by forest-based industries consistent with sound environmental practices, and to provide for other uses of the forest.

2. TARGETS

The forestry targets in Lindsay District are:

- to produce an annual continuous supply of 212,300 cubic metres (7.5 million cubic feet) of wood for industrial purposes by the year 2020 while maintaining the present diversity of forest products; and
- to make the maximum contribution from forest production to the achievement of the provincial energy target.

3. RESOURCE ANALYSIS

a. Current and Potential Harvest

Reliable estimates of current forest harvests in Lindsay District are only available for wood processed by the 36 sawmills in the district, and pulpwood sold by the ministry from agreement forests. These average annual harvest figures total 22,780 cubic metres (805,000 cubic feet). A considerable volume of sawlogs, veneer logs, posts, poles and fuelwood is missing from this figure since no estimates are available for timber cut and consumed privately or exported from the district.

The district's forest production potential has been estimated based on an assessment of existing and potential forested lands, possible constraints and the probable productivity of forested lands.

Currently forested land totals 193,100 hectares (482,900 acres). If forested land which may be urbanized or is best suited for other resource management uses is subtracted, then the land potentially available for forest management totals 179,800 hectares (449,500 acres). Using an average productivity rate of 2.3 net merchantable cubic metres per hectare per year (32 cubic feet per acre per year), the net existing forest area could yield 413,500 cubic metres (14,596,500 cubic feet) of wood fibre per year. Thus, the potential production from the net existing forest area is almost double that required to meet the target.

Because of the large existing forested area, and the fact that these forests primarily contain valuable hardwood species, the primary thrust of the forestry program in Lindsay District will be to encourage effective management of existing forests. Reforestation will replace areas lost to competing land uses, and assist in meeting other resource management objectives. The land base potentially suitable for reforestation is estimated in Table 2.

It must be emphasized that wood is harvested to provide a variety of wood products, including poles, sawlogs, and veneer logs, as well as pulpwood and fuelwood. Tentatively a requirement of 60% sawlogs, 20% pulpwood and 20% other products is forecast in the district.

Fuelwood is currently an important forest product in the district. However, it has not been considered or counted as part of the target for industrial wood. Rather, it is considered to be a valuable by-product resulting from thinning operations or the use of tree tops from harvest cuts for sawlogs.

Most of the forested land in Lindsay District is privately owned, and thus is managed at the discretion of the landowner. The quality of forest management on private land is therefore one of the great variables affecting the harvest. Ultimately, success in achieving the targets will depend upon the willingness of landowners to carry out forest management (either independently or with ministry assistance). The economic return for forest products in future years will be a major factor in determining the extent of forest management on private land.

b. Constraints

It is likely that full forest production potential may not be realized in urban fringe areas, lakeshores, known development areas, some high potential mineral aggregate deposits, deer yards and significant areas of natural and scientific interest. As a result, these areas were excluded from the production forests when volume projections were calculated.

In the calculations it was assumed that half of the high potential sand and gravel deposits which have existing forests or are suitable for planting may not be available for long term forest management. Although the total area affected by deer wintering areas and areas of natural and scientific interest was subtracted, this area is relatively small and therefore has very little effect on estimates of land potentially available for forestry.

It is important to note that areas with Canada Land Inventory agricultural soil capability classes 1, 2 and 3 will generally not be considered for ministry reforestation programs. However, it is an objective that existing valuable hardwood woodlots in agricultural areas should be retained and managed intensively.

4. PROGRAM STRATEGY

a. Contribution to General Policies

Public Safety

- prepare and implement a fire management plan;
- develop cooperative fire prevention and control agreements with municipalities; and
- ensure that development and harvesting activities in forested areas are designed to reduce the possibility of fire spread.

Environment

- manage forests so that the habitat of provincially rare and endangered animals and plants, if known, will be protected;
- prepare and implement class and individual environmental assessments, where required; and
- ensure that marking for selective cutting is sensitive to the ecological functions of wooded areas.

Energy

- encourage the harvest of fuelwood; and
- participate in joint studies where feasible in establishing energy plantations and utilizing waste or residual materials.

The forestry program's contribution to the integrated resource management policy is outlined in section c, Resource Management Integration Guidelines.

b. Important Resource Areas and Area Strategies

The following factors were used to select important resource areas for the forestry program in Lindsay District:

TABLE 2 SUMMARY OF FORESTRY LANDS

	Hectares	Acres
Gross existing forest area(1)	193,145	482,862
Deduction for high potential sand and gravel deposits(2)	4,333	10,700
Deduct potential urbanization	6,075	15,000
Deduct areas of natural and scientific interest, and winter deer concentration areas	2,956	7,300
Net existing forest area	179,781	449,452
Gross area potentially suitable for planting	94,122	232,400
Deduction for high potential sand and gravel deposits(2)	9,031	22,300
Deduct potential urbanization	1,701	4,200
Deduct areas of natural and scientific interest	81	200
Net area potentially suitable for planting	83,309	205,700
Combined total net forestry management area (Net existing forest plus net potentially suitable for planting)	263,090	655,152

(1) From 1978 Forest Resources Inventory.
(2) It is assumed that half of the high potential sand and gravel deposits which have existing forests or are suitable for planting may not be available for forest management.

TABLE 3 TIMBER PRODUCTION TARGET SUMMARY

TARGET YEAR: 2020

Target (annual supply by 2020)	Estimated current utilization(1)	Estimated potential production from net existing forest and plantable area(2)
212,300 cu. metres	22,780 cu. metres	413,500 cu. metres
7,500,000 cu. feet	805,000 cu. feet	14,596,500 cu. feet

(1) The current utilization figures are the total of lumber and pulpwood, reported by sawmills in the district, or cut from forests managed by the ministry. Although the amount of additional private cutting is unknown, it is believed to be substantial.
(2) Volumes are net merchantable timber.

- the ministry will continue its forestry commitments on agreement forest properties, private lands under *Woodlands Improvement Act* agreements, the Orono Nursery, and certain Crown lands;
- high quality existing woodlots, particularly tolerant hardwoods, generally should be maintained;
- trees will be planted with a long term prospect of producing timber, or to contribute to other program objectives;
- trees planted should be able to complete their rotation in order to yield merchantable products;
- forests should be used to assist in meeting other resource or social objectives as well as timber production, e.g., protect coldwater streams;
- highly productive sites should be used in preference to less productive sites where possible;
- where possible the forestry program should be flexible in order to adjust to the market conditions, contribute to biomass, and improvements in genetics and forestry management techniques;
- there should be maximum utilization of wood harvested. This will include production of poles, fence posts, pulpwood, veneer and sawlogs; and
- normally, plantations of shade tolerant species will be allowed to regenerate with tolerant hardwood species moving in under the maturing plantation. Pine plantations will be allowed to regenerate back to pine and to oak species which are shade tolerant to moderately tolerant.

The important areas for forest management are shown on Map 2 and are discussed below.

High Forest Management Potential

Oak Ridges Moraine: The Oak Ridges Moraine has deep productive soils and is the headwater of many of the district's important coldwater streams. Two large ministry managed agreement forests are located within this area: Ganaraska Region Conservation Authority Agreement Forest, and Northumberland County Agreement Forest. This is an area of relatively extensive forested land, and forest management practices are necessary to meet other resource management objectives, e.g. soil and water conservation, flood control, and to provide recreational opportunities. The area is not under threat of urbanization, although some estate development may be expected, especially in the west. The moraine has therefore been considered as an important resource area for the forestry program. A competing land use is the possible loss of forested land to mineral aggregate extraction, as there are extensive high potential mineral aggregate resource areas in this part of the moraine.

Although the significance of the Oak Ridges Moraine is widely recognized, most municipal official plans do not have special policies for forestry. Forestry is generally compatible with the other uses in the rural or agricultural designation in official plans.

Moderate Forest Management Potential

This includes the area between the Oak Ridges Moraine and the edge of the limestone plains of Dummer, Belmont, Harvey, Bexley, and Verulam Townships; and the area to the south of the Oak Ridges Moraine, excluding urban areas. Although there are many conflicting and potentially conflicting land uses including high potential mineral aggregate areas and some rural estate development, the forestry potential and site productivity is high. Although scattered, the majority of the district's tolerant hardwood woodlots are located within these areas, and woodlot management should be intensive. There are many vacant areas in which reforestation does not conflict with agriculture or other land uses. Planting where the long term prospect of harvest is expected, or with a combination of resource management objectives in mind, is feasible on these sites. There is an abundance of coldwater streams and watersheds which would benefit from further reforestation for the purposes of streambank stabilization, maintaining water quality, and flood control.

Low Forest Management Potential

Woodlots and forested tracts in Dummer, Belmont, Harvey, Bexley, and Verulam Townships: The north part of the district has extensive areas of woodland, poor and abandoned agricultural land, and rock. The capability for producing trees is poorer than on the soils farther south, but, in most of this area there is relatively little competition with urbanization, estate development, or mineral aggregate extraction. The extent of lands available for forest management, and the likelihood of trees reaching maturity make this a valuable forestry resource, even though planting is a low priority here.

c. Resource Management Integration Guidelines

(i) Forestry staff will provide technical advice and assistance to the other programs in the management of forestry aspects of their projects and properties.

(ii) Those forest management projects that protect or enhance coldwater streams and their headwaters should be given special consideration during project selection.

(iii) Forest management may take place in provincial parks for demonstration purposes, park development or as part of approved park management activities according to master plans and to provincial parks planning and management policies.

(iv) Forest management may occur in candidate parks, with judicious controls, if it will have no significant negative impact on the long term achievement of park objectives and if it is conducted within the framework of approved management guidelines.

(v) Forest management in areas of significant natural and scientific interest will require prior consultation with parks staff.

(vi) Forest management practices will be coordinated with fish and wildlife, and whenever possible will incorporate management techniques that will improve wildlife habitat, particularly in significant wildlife biological areas and wildlife management areas. Landowners will be made aware of the option of incorporating wildlife management into their forest management plans or agreements.

(vii) Forest management should be conducted on high potential mineral aggregate areas only after consultation with mineral resources staff. Topics to be discussed include the resource potentials for both forestry and mineral aggregate, the probability of extraction occurring, and the possibilities for sequential use.

(viii) District supervisors will continue to be consulted during both the preparation and review of agreement forest and Crown land forest management plans.

Map 2

LINDSAY DISTRICT

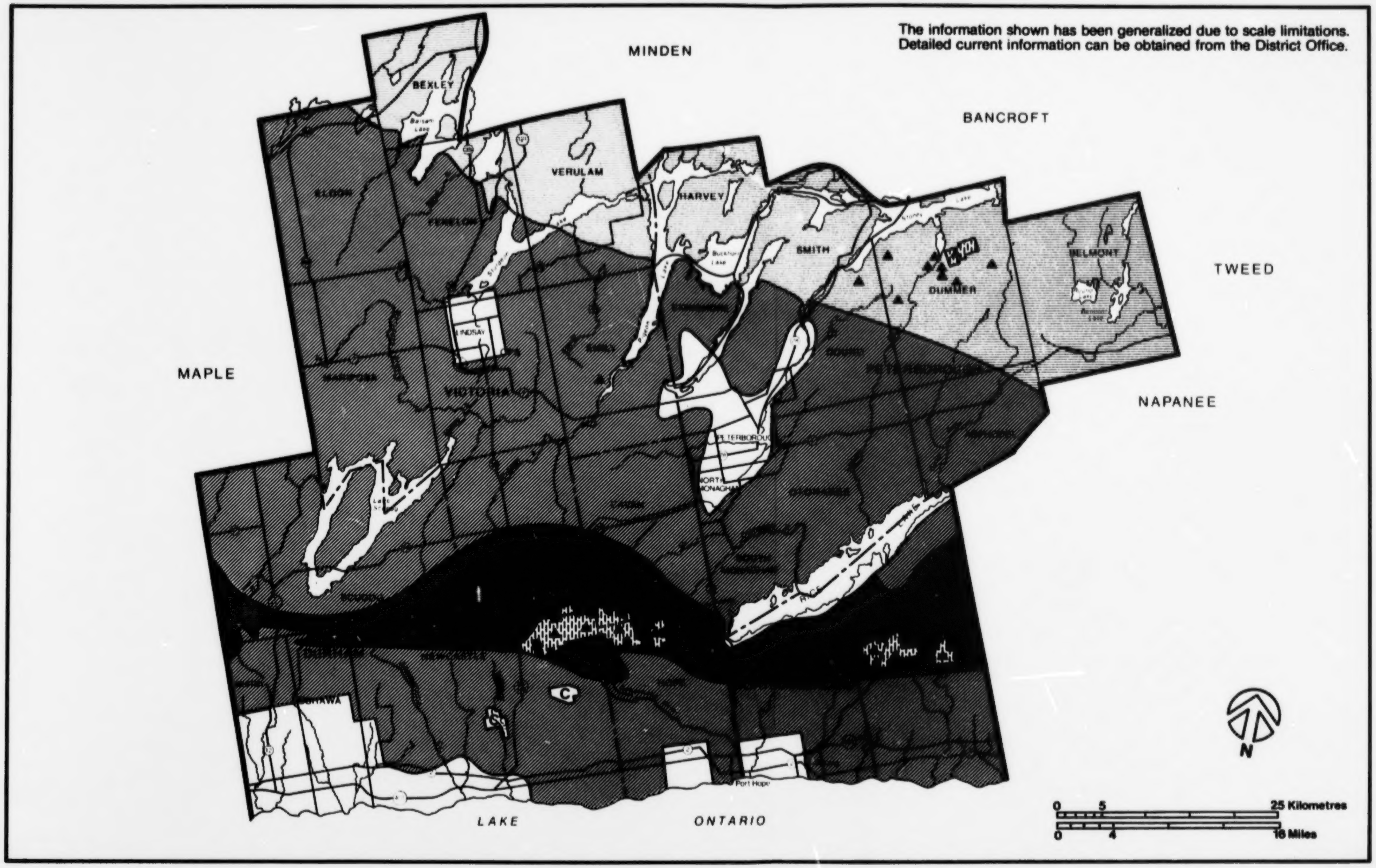
FORESTRY

LEGEND

- ⊟ Township Boundary
- ⊟ County or Regional Boundary
- ⊟ MNR District Boundary

Important Resource Areas

- ■ High Forest Management Potential
- ▨ Moderate Forest Management Potential
- ░ Low Forest Management Potential
- ☐ Areas Unavailable for Forest Production
- C Crown Forest
- ▦ Agreement Forest



The information shown has been generalized due to scale limitations. Detailed current information can be obtained from the District Office.

MINDEN
BANCROFT
TWEED
NAPANEE
MAPLE
BEXLEY
Balsam Lake
VERULAM
HARVEY
Buckhorn Lake
SMITH
DUMMER
BELMONT
ELDON
FENELON
LINDSAY
MARIPOSA
VICTORIA
PETERBOROUGH
NORTH MONAGHAN
DURHAM
NEWCASTLE
OSHAWA
Port Hope
C
LAKE
ONTARIO
N
0
5
25 Kilometres
0
4
16 Miles

1983

Consideration will be given to mineral resources, fish, wildlife, recreation and environmental concerns in these plans.

(ix) Forest management staff will notify staff in other programs of pending agreements for lands where another program interest has been mapped, or where the landowner has special interests related to their program.

(x) Forest management proposals in areas with planning (official plan and zoning) or development concerns will be reviewed with district lands staff.

(xi) On hazard lands, forest management prescriptions will incorporate site protection objectives (erosion control, bank stabilization, etc.). Flood prone lands may be managed for forest production purposes.

d. External Co-ordination Guidelines

(i) The ministry's forest management activities will normally be restricted on lands designated for urban expansion, rural residential development, and other uses which would significantly reduce the forest production potential. Involvement in these areas will usually be limited to advisory services.

(ii) Any municipal planning policies which may affect forest management on private land, especially in areas designated environmentally sensitive, will be carefully reviewed before forestry activities are carried out.

(iii) Agreement forests will be managed with the continued involvement of the owners (counties and conservation authorities).

(iv) Reforestation will not occur on prime agricultural land as determined by the Ministry of Agriculture and Food. Existing quality woodlots in agricultural areas will be managed wherever possible.

(v) The ministry will cooperate with conservation authorities in the provision of private land forestry services.

(vi) Forest management plans will be available for public review.

e. Plan Input and Review Guidelines

(i) The ministry will encourage official plan policies which recognize the value of important forest resource areas and seek the protection of these areas for future management.

(ii) The ministry will encourage the adoption of zoning by-laws which recognize forest management as a permitted use in all appropriate areas of the municipality.

(iii) The ministry will encourage the implementation of tree-cutting by-laws.

(iv) The ministry will:

- provide information on existing and potential forest resources;
- encourage the protection of existing high quality woodlots from incompatible development;
- encourage the use of forests for commercial, recreational, aesthetic and conservation values;
- encourage private landowners to participate in forestry advisory service and assistance programs; and
- encourage private developments to retain as much existing forest cover as possible.

B: mineral aggregate

1. OBJECTIVE

The objective for mineral aggregate production in southern Ontario is to meet anticipated future demand with minimal disturbance to natural and cultural resources and the social environment.

2. TARGET

The target for mineral aggregate production in Lindsay District is to ensure a total cumulative supply of 252 million tonnes (278 million tons) for the period 1982-2000.

3. RESOURCE ANALYSIS

The three main commodities produced in Lindsay District are sand and gravel, crushed limestone and traprock. For this reason, the analysis and strategies focus mainly on these mineral aggregate commodities.

Currently there are 250 licenced pits, 8 licenced quarries, and one licenced pit and quarry operation in the district. The locations of the licenced properties are shown on the mineral aggregate map, Map 3. Licenced properties cover a total area of approximately 7,898 hectares (19,509 acres). Over the past five years (1977-1981), an average of 8.1 million tonnes (8.9 million tons) of sand and gravel and 0.9 million tonnes (1.0 million tons) of limestone has been extracted on an annual basis. The district's single traprock operation has averaged 0.32 million tonnes (0.35 million tons) annually during this period.

Resources of sand and gravel on licenced properties are estimated to be 437 million tonnes (482 million tons). Licenced limestone resources are estimated at 110 million tonnes (121 million tons). Information on licenced traprock resources is not available.

The target for mineral aggregate is based on projected production, and represents the minimum supply of aggregates which must be protected to meet future demands. A breakdown of the target into the three main commodities produced is given in Table 4.

The statistics on estimated resources on licenced properties suggest the target can be met by the licenced properties. It is, however, unrealistic to place total reliance on existing licenced resources to meet the target. There are several reasons for this:

- there is no guarantee that licenced operations will remain licenced or be available to meet projected demand;
- the ministry cannot guarantee continued use or level of production as it has no control on the business aspect of licenced operations;
- other considerations such as location of licenced resources to markets, transportation costs, competitive pricing, and aggregate product specifications are factors which make it difficult to ensure supply; and
- mineral aggregates are a non-renewable resource and demand will not cease in the year 2000.

In order to ensure the continuing availability of adequate resources it is often necessary to maintain the resource potential of more land than the target would suggest.

The district is fortunate in that it contains unlicenced deposits of sand, gravel and limestone which are suitable for meeting future aggregate needs. Due to favourable qualitative and quantitative characteristics, these deposits have been identified as high potential aggregate resource areas.The extent and distribution of these resources is shown on Map 3 and related resource tonnage is summarized in Table 4.

The high potential aggregate resource areas were identified on the basis of geological, economic and planning criteria. The geological and economic criteria include the geological quality and extent of a given deposit; its proximity to markets and other sources; and the general market demand for the commodity. Once specific deposits were identified, possible constraints were assessed. These include obvious physical constraints such as existing and proposed urban areas, and transportation and utility corridors; other ministry resource interests, such as existing and candidate provincial parks; and conservation authority lands. Map 3 reflects the preliminary results of these analyses. The high potential mineral aggregate areas will be further refined following discussions with municipalities and other appropriate agencies. The map may also be modified and updated as new aggregate resource areas are identified in light of additional geological information.

For reasons cited earlier on the difficulties of ensuring supply from licenced resources, the district's high potential resources will play an important role in ensuring that the mineral aggregate target to year 2000 can be met. Furthermore, the existing licenced properties are not adequate to meet longer term requirements and hence, special emphasis must be directed to the district's high potential resource areas.

The ministry has attempted to identify the high potential mineral aggregate areas in Lindsay District. The high potential resource areas shown on the mineral aggregates map, Map 3, are in excess of anticipated future requirements. It would be unrealistic for the ministry to seek to maintain the potential of all mapped areas. Rather, through discussion with municipalities, it is within the high potential areas that the ministry will seek to keep future land use options open.

Stated simply, the ministry is seeking to identify and maintain the potential of sufficient aggregate in the high potential resource areas to meet the target (taking the difficulties of supply into consideration), and to keep future options open for this non-renewable resource. Official plan

TABLE 4 SUMMARY OF MINERAL AGGREGATE TARGETS

	Current Average Annual Production (1977-1981)	Target (Cumulative Production) 1982-2000	Projected Demand (Cumulative Production) 1980-2020	Estimated Resources in Licensed Areas (1982)	Estimated High Potential Resources(2)	
Commodity(1)	millions of tonnes/(tons)	millions of tonnes/(tons)	millions of tonnes/(tons)		hectares/ (acres)	millions of tonnes/(tons)
sand and gravel	8.1 (8.9)	221 (244)	571 (634)	437 (482)	19,300 (47,600)	4,260 (4,700)
limestone	0.9 (1.0)	23 (25)	51 (56)	110 (121)	68,000 (168,000)	25,700 (28,300)
traprock	0.32 (0.35)	8 (9)	18 (20)	information not available	information not available	
Total	9.32 (10.25)	252 (278)	640 (710)	547 (603)	87,300 (215,600)	29,960 (33,000)

(1) Targets have been tentatively subdivided into commodities to facilitate comparison of supply and demand.
(2) Estimated resources in high potential areas have had selected constraints applied as outlined in the text.

designations such as rural or agriculture provide for ongoing land uses without closing the door on the future.

In conclusion, it appears the year 2000 target for mineral aggregate can be met in the district. Achievement of the long range projected demand (year 2020) will require special consideration of the district's high potential resource areas and existing licenced pits and quarries.

4. PROGRAM STRATEGY

a. Contribution to General Policies

Public Safety

- work towards the elimination of hazards around abandoned pits and quarries by preparing and maintaining a list of abandoned sites; and
- in cooperation with the Ministry of Labour, make field inspections and determine appropriate action to secure and eliminate hazards associated with abandoned pits and quarries.

Environment

- endeavour to achieve program objectives with minimal long term disturbance to the environment; and
- require mitigating measures and rehabilitation where environmental impacts from extraction operations are inevitable.

The contributions to the integrated resource management policy is outlined in section c, Resource Management Integration Guidelines.

b. Important Resource Areas and Area Strategies

Lindsay District has relatively large resources of sand, gravel and limestone. The selection of high potential resource areas is based on the criteria outlined in the Resource Analysis section and information that is presently available to the Ministry of Natural Resources. The high potential areas shown on the mineral aggregates map, Map 3, can be categorized as follows:

(i) Existing licenced pits and quarries
(ii) Oak Ridges Moraine
(iii) Esker deposits
(iv) Kame deposits
(v) Iroquois shoreline deposits
(vi) Limestone deposits

(i) Existing licenced pits and quarries
Existing licenced pits and quarries are widely scattered in most parts of Lindsay District. As pits and quarries gradually become depleted, they will be rehabilitated and phased out of operation. Nevertheless, the existing operations will continue to be the mainstay of the mineral resources program for some time to come. There are presently 259 licenced pits and quarries in the district.

(ii) Oak Ridges Moraine The moraine crosses the southcentral part of the district from east to west. Several pits in the moraine show sand and gravel deposits up to 30 metres (100 feet) deep. Tonnage in the two highest producing townships in the district (Manvers and Reach) is primarily from the moraine. About 25 percent of the district's pit operations are located on the moraine and they annually provide about 30 percent of pit production.

(iii) Esker deposits Numerous eskers are present in Lindsay District, all occurring north of the Oak Ridges Moraine. Eskers are long, narrow, sinuous ridges, some of which reach over 30 metres (100 feet) in height. Four important esker systems from an aggregate producing standpoint are the Norwood Esker, Omemee Esker, Bridgenorth Esker, and the Cameron-Goose Lake Esker.

Almost 35 percent of the district's licenced pits are located on eskers, and produce about 40 percent of annual pit production.

(iv) Kame deposits The largest area covered with kame material is southeast of Omemee. Another significant kame deposit is southwest of Pigeon Lake. High grade gravel is mined from kames, and to a lesser extent spillway deposits, but production is not great, as only about 9 percent of the pits are licenced in these formations and the operations are small.

(v) Iroquois shoreline deposits Iroquois beach deposits occur in the southern townships abutting Lake Ontario. The thinness and narrow extent of this deposit limits its potential to supply a long term high volume demand. However, its close proximity to southern markets is a very important consideration in present day and short term supply of aggregates. About 10 percent of the licenced pits in the district are located in this deposit.

(vi) Limestone deposits Because of differences in quality and depths of overburden, selected limestone areas are mostly in the Gull River and Bobcaygeon formations. These formations occur in a wide band across the northern part of the district from Bexley to Belmont Townships, with the largest potential being in Bexley, Harvey, Smith, Dummer and Belmont Townships.

While limestone is being used to supply a wide range of products, it is considerably more expensive to mine than sand and gravel deposits. The district's limestone resources are important in that they will ensure adequate supplies of aggregate are potentially available over the long term, as sand and gravel deposits gradually become depleted.

To assist in the achievement of the mineral aggregate objective and target, special emphasis will be given to the following general program strategies for the important resource areas:

- the ministry will encourage protection of accessible resources (i.e. those closest to markets and including resources along highway corridors), in the high potential resource areas, in preference to more distant deposits;
- the aggregate resources in 60 percent of the district have been inventoried and evaluated through the ministry's Aggregate Resources Inventory Program (ARIP) on a local municipal basis. The ministry expects this program to continue, and have inventories completed for the remainder of the district. Any new or updated information on high potential resource areas will be incorporated into the *Land Use Guidelines* text and map when appropriate, and provided to the local municipality;
- evaluation of abandoned pits and quarries will continue to determine potential resource and rehabilitation priorities;
- through the application of the *Land Use Guidelines,* land uses will be encouraged which keep future options open in the high potential resource areas; and
- rehabilitation programs to desired uses such as agriculture, recreation, and forestry will be strongly encouraged and achieved wherever possible. The ministry will promote the rehabilitation of licenced properties through the application of the *Pits and Quarries Control Act.* In most cases, rehabilitation can achieve the desired ends. Subject to certain constraints, such as height of the water table, a pit or quarry can be rehabilitated to almost any desired after use.

c. Resource Management Integration Guidelines

(i) Proposals for extraction activities, including applications and site plans, will be circulated to all ministry programs. Significant changes to these documents which would alter the character of operations will also be circulated to all programs.

(ii) In approving site plans, a buffer will normally be required between the extraction limit and any stream or lake. The buffer should provide protection to habitat if necessary, as well as siltation control. The fish and wildlife program will be consulted regarding the location and types of buffers.

(iii) There will be no aggregate extraction in provincial parks and wildlife management areas except for the approved on-site utilization of materials.

(iv) Pit or quarry applications in floodplains will receive detailed scrutiny to ensure that they will not significantly increase flooding hazards.

(v) Mineral resources staff will develop detailed guidelines in conjunction with other ministry staff and, where appropriate, other agencies regarding extraction proposals potentially affecting streams and lakes, floodplains, wildlife habitat, and highly productive woodlots.

(vi) Extraction proposals on areas of natural and scientific interest will be reviewed with parks staff.

(vii) The ministry will encourage pit operators to rehabilitate their sites into a condition compatible with surrounding land uses. Where appropriate, mineral resources staff will encourage rehabilitation involving natural resource management,

Map 3

LINDSAY DISTRICT

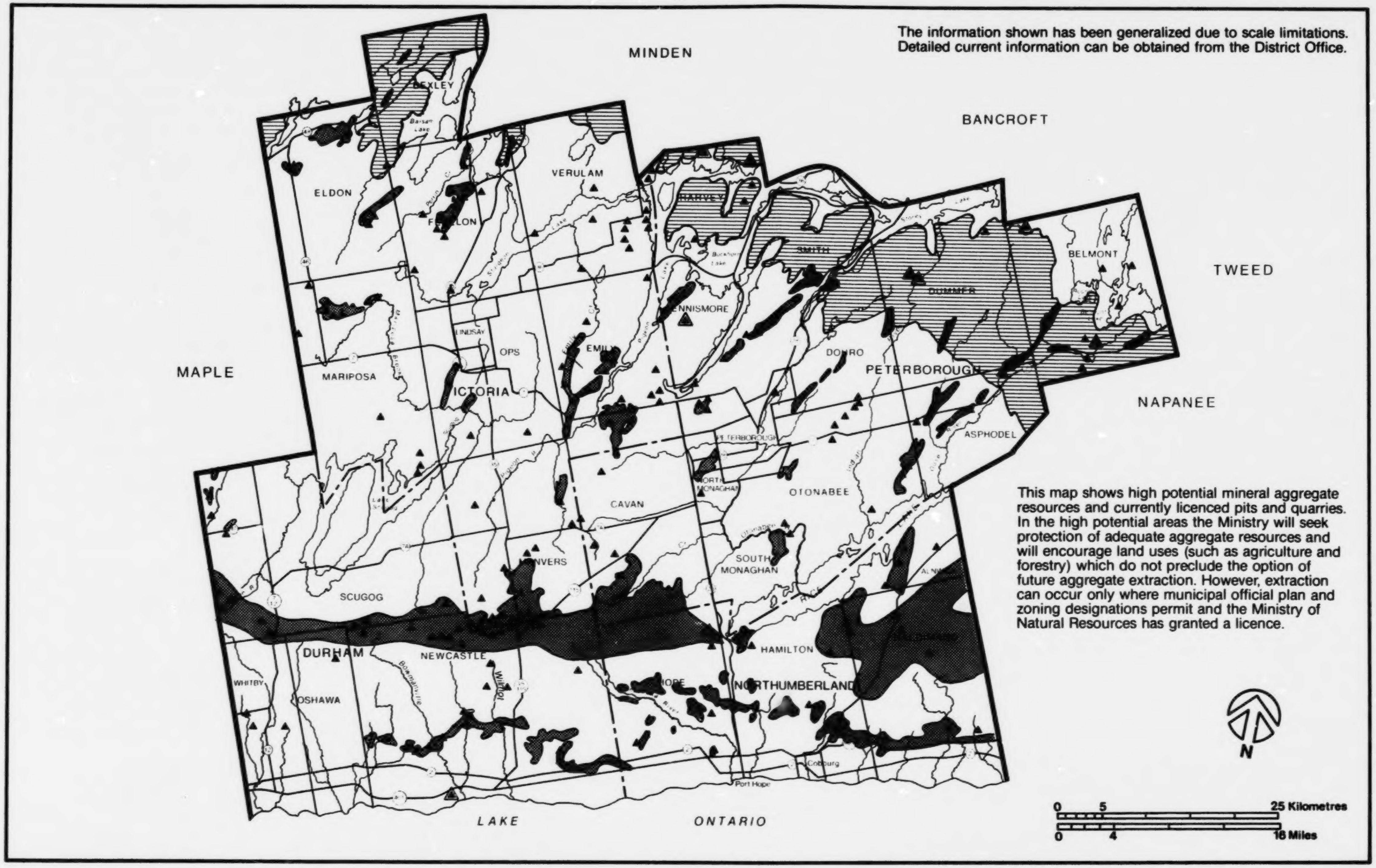
MINERAL AGGREGATE

LEGEND

- Township Boundary
- County or Regional Boundary
- MNR District Boundary

Important Resource Areas

- ■ High Potential Sand and Gravel
- ▤ High Potential Bedrock
- ▲ Pit
- ▲ Quarry


MINDEN
BANCROFT
TWEED
NAPANEE
MAPLE
LAKE
ONTARIO
BEXLEY
Balsam Lake
ELDON
FENELON
VERULAM
HARVEY
Buckhorn Lake
SMITH
BELMONT
DUMMER
ENNISMORE
EMILY
LINDSAY
OPS
MARIPOSA
VICTORIA
DOURO
PETERBOROUGH
ASPHODEL
PETERBOROUGH
NORTH MONAGHAN
OTONABEE
CAVAN
MANVERS
SOUTH MONAGHAN
SCUGOG
DURHAM
NEWCASTLE
HAMILTON
ALNWICK
HALDIMAND
HOPE
NORTHUMBERLAND
WHITBY
OSHAWA
Port Hope
Cobourg
Rice Lake
N
0
5
25 Kilometres
0
4
16 Miles

The information shown has been generalized due to scale limitations. Detailed current information can be obtained from the District Office.

This map shows high potential mineral aggregate resources and currently licenced pits and quarries. In the high potential areas the Ministry will seek protection of adequate aggregate resources and will encourage land uses (such as agriculture and forestry) which do not preclude the option of future aggregate extraction. However, extraction can occur only where municipal official plan and zoning designations permit and the Ministry of Natural Resources has granted a licence.

1983

and will refer the operator to the appropriate ministry program for advice.

(viii) Mineral resources staff will assist the parks program in the identification of earth science features of educational and scientific significance.

(ix) When reviewing applications for wayside pits, mineral resources staff will consult *Land Use Guidelines* maps for possible conflicts with other program interests.

(x) Mineral resources staff will develop in conjunction with other district staff, guidelines for tree planting and wildlife enhancement on specific sites identified as high potential aggregate resources.

d. External Co-ordination Guidelines

(i) In processing pit and quarry applications, mineral resources staff will ensure that a site has proper official plan and zoning status before issuing a licence.

(ii) The ministry will work with other agencies to ensure that mineral aggregate resources which would be made available by a planned development (e.g. a reservoir) will be utilized wherever possible.

(iii) The ministry will provide municipalities, other government agencies, and the public with basic resource data. The ministry will assist municipalities in the identification of areas required to meet local and provincial aggregate requirements.

(iv) Mineral resources staff will circulate pit and quarry applications to local and regional municipalities and counties, the Ministry of the Environment, Ministry of Agriculture and Food, and the Ministry of Municipal Affairs and Housing, and where appropriate to conservation authorities, to determine the concerns of these agencies so they may be addressed in the site plans.

(v) When the ministry is contacted by the Ministry of Transportation and Communications during the preparation of aggregate sources lists, programs will be consulted as appropriate to ensure their concerns are considered.

(vi) The Ministry of Natural Resources will encourage the concept of extraction as an interim land use activity. Toward this end the ministry will:

- encourage operators of extractive sites to make the most effective use of the land resource;
- encourage sequential land use and progressive and ultimate rehabilitation with the active extraction area limited to a minimum practical size;
- encourage operation of the site in a manner as compatible as possible with surrounding land uses and activities; and
- encourage all depleted extractive sites, including wayside pits and quarries, to be returned to a condition suitable for an acceptable after-use and compatible with adjacent land uses.

e. Plan Input and Review Guidelines

(i) Official plans should:

- include policies that recognize existing pits and quarries and protect them from incompatible land uses;
- identify and protect from land uses which are incompatible with possible future extraction as much of the mineral aggregate resources occurring in the municipality as is realistically possible in the context of the municipality's other necessary land use planning objectives, and in recognition of the continuing local, regional and provincial need for mineral aggregates;
- provide a clear and reasonable mechanism to permit the establishment or expansion of pits and quarries;
- permit wayside pits and quarries without requiring an amendment to the plan or zoning by-law, except the plan may require a rezoning for a wayside pit or quarry in areas of existing development or particular environmental sensitivity which are designated in the plan; and
- include policies to encourage rehabilitation to an after-use compatible with the long term uses permitted by the plan.

(ii) Zoning by-laws should include the following:

- definitions for the terms pit, quarry, wayside pit, and wayside quarry;
- a distinctive extractive zoning category such that pits or quarries are permitted activities with no uses or other activities permitted that would be incompatible with mineral aggregate operations;
- provisions that permitted uses in the extractive zone include accessory uses such as stockpiling, sorting and washing operations; compatible uses such as agriculture and forestry; and ancillary uses such as asphalt plants (which can be limited to specific properties by the local municipality); and
- a clause that permits wayside pits and quarries in all zoning categories, except in zones which are established to recognize existing development or areas of particular environmental sensitivity, where wayside pits and quarries may be prohibited.

(iii) The ministry will provide comments to planning review and approval agencies on proposed planning actions that may have implications for mineral aggregate resource development. Comments will relate to the compliance of these actions with mineral aggregate resource policy and to wise mineral aggregate resource management.

(iv) The ministry will provide information on the location of abandoned pits and quarries to promote public safety.

C: minerals and fossil fuels

1. OBJECTIVE

The objective for minerals and fossil fuels in southern Ontario is to provide for a strengthening of the contribution of these resources to provincial economic development and energy production.

2. TARGET

The target for mineral resources is to keep open as much Crown land and unalienated mining rights as possible for mineral exploration and development.

Specific mining production and fossil fuel targets cannot be established because of difficulties in predicting market trends and assessing resource potential, and because actual production is a responsibility of the private sector.

3. RESOURCE ANALYSIS

In 1982, no operating mines existed in the district. There has, however, been a resurgence of mineral exploration in Belmont Township involving gold at Cordova Mines (past producer) and high calcium marble at Whitney Lake. The potential for mining development is greatest in Belmont Township where in addition to gold and calcium, there are other known or reported occurrences of minerals. These include iron (past producer at Blairton), chalcopyrite (copper), sphalerite (zinc) and pyrrhotite (nickel).

Over the past 50 years, several oil and gas wells have been drilled in the district. All wells have been abandoned with only a few indicating small gas showings. Lindsay District is not considered a potential area for oil and gas resources.

A recent preliminary study carried out for the ministry identifies peatland in the district. A detailed peatland resource evaluation survey is now being carried out within the north half of the district, and information from the study is expected to be available in April of 1983.

Marl has had a history of exploration and development in the district, particularly at Buckley Lake in Douro Township. Although marl was the principal raw material for cement-making in the early years of this century, it has not been used commercially in Ontario for many years. Further use of the district's marl resources for cement, or as a mineral filler, is most unlikely due to impurity, poor colour, and moisture content. It is generally believed that as long as limestone is readily available, marl will not be economical.

The Minerals and Fossil Fuels map, Map 4, shows the location of abandoned oil and gas wells, all known and reported mineral occurrences including past producers, and marl resources by location.

Market demand will determine any future development of the district's mineral and fossil fuel resources. Changing commodity values (particularly gold), technological developments (e.g., heap leaching experiments at Cordova Mines), and the demand for energy sources may alter the relative importance of various minerals and fossil fuels, and the potential areas to support mining development. As a result, it is important that wherever possible, land continue to be available for exploration in order that known mineral or fossil fuel occurrences can be re-assessed, or new deposits be discovered as values in these commodities change.

A major difficulty related to mineral and fossil fuel exploration in the district is that much of the

Map 4

LINDSAY DISTRICT
MINERALS AND FOSSIL FUELS

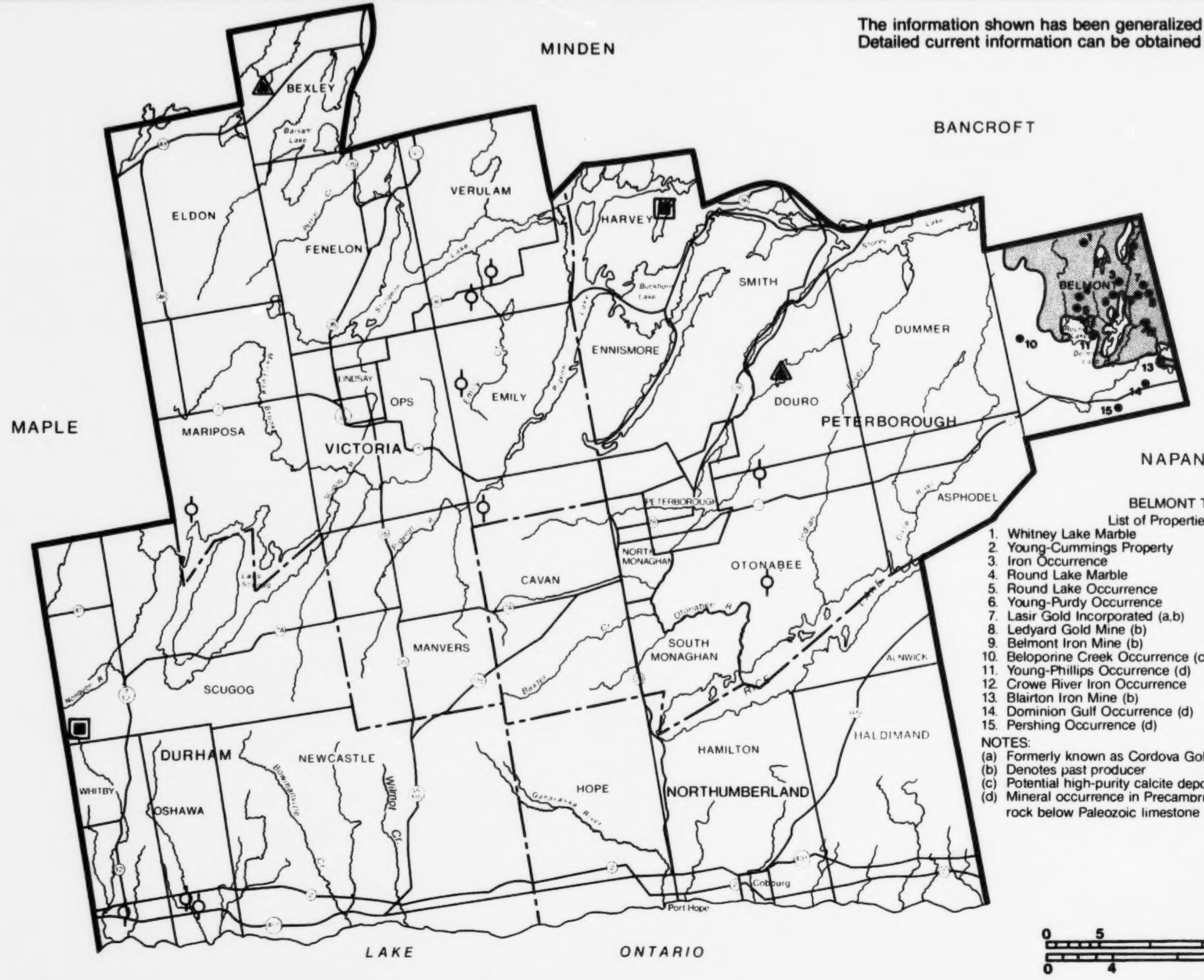
LEGEND

- Township Boundary
- County or Regional Boundary
- MNR District Boundary

Important Resource Areas

- ▨ High Potential Mineral Areas
- ▲ Marl - Past Producer
- ▣ Marl - Occurrence
- Abandoned Oil/Gas Well

The information shown has been generalized due to scale limitations. Detailed current information can be obtained from the District Office.


MINDEN
BANCROFT
TWEED
NAPANEE
MAPLE
BEXLEY
Balsam Lake
ELDON
FENELON
VERULAM
HARVEY
Buckhorn Lake
SMITH
ENNISMORE
DUMMER
BELMONT
10
13
14
15
LINDSAY
OPS
EMILY
DOURO
PETERBOROUGH
MARIPOSA
VICTORIA
ASPHODEL
PETERBOROUGH
NORTH MONAGHAN
CAVAN
OTONABEE
Otonabee R.
SOUTH MONAGHAN
MANVERS
SCUGOG
ALNWICK
Rice
HALDIMAND
HAMILTON
DURHAM
NEWCASTLE
Wilmot Cr.
HOPE
Ganaraska River
NORTHUMBERLAND
WHITBY
OSHAWA
Port Hope
Cobourg
LAKE
ONTARIO
N
0
5
25 Kilometres
0
4
16 Miles

BELMONT TOWNSHIP
List of Properties/Occurrences

1.	Whitney Lake Marble	Calcite
2.	Young-Cummings Property	Pyrite, Chalcopyrite, Sphalerite
3.	Iron Occurrence	Magnetite
4.	Round Lake Marble	Calcite
5.	Round Lake Occurrence	Pyrite, Pyrrhotite
6.	Young-Purdy Occurrence	Magnetite
7.	Lasir Gold Incorporated (a,b)	Gold, Silver
8.	Ledyard Gold Mine (b)	Gold, Silver
9.	Belmont Iron Mine (b)	Magnetite, Pyrite
10.	Beloporine Creek Occurrence (c)	Calcite
11.	Young-Phillips Occurrence (d)	Hematite, Magnetite
12.	Crowe River Iron Occurrence	Hematite
13.	Blairton Iron Mine (b)	Magnetite
14.	Dominion Gulf Occurrence (d)	Magnetite
15.	Pershing Occurrence (d)	Magnetite

NOTES:
(a) Formerly known as Cordova Gold Mine
(b) Denotes past producer
(c) Potential high-purity calcite deposit in Paleozoic limestone
(d) Mineral occurrence in Precambrian rock below Paleozoic limestone

1983

land with resource potential is privately owned. In some cases the land is already developed or is zoned or committed to uses with which mining development may be incompatible. A second difficulty is the lack of detailed geological mapping and information to permit the definitive identification of areas likely to be suitable for exploration and development.

---

4. PROGRAM STRATEGY

a. Contribution to General Policies

Public Safety

- in cooperation with the Ministry of Labour, make field inspections and determine appropriate action to secure and eliminate hazards associated with abandoned open pit mines and mine shafts; and
- keep up-to-date maps showing the location of abandoned oil and gas wells. These maps will be consulted when development proposals are reviewed.

Environment

- endeavour to achieve program objectives with minimal long term disturbance to the environment.

Energy

- assist in the identification of areas suitable for peat production.

The contribution to the integrated resource management policy is outlined in section c, Resource Management Integration Guidelines.

b. Important Resource Areas

Based on previous mining history, recent exploration activity, and current geological information, the ministry views Belmont Township as a high potential minerals area.

Two important locations within the high potential minerals area are:
(i) the Cordova Gold Mine, and
(ii) the Whitney Lake high calcium deposit.

Other areas of the district may warrant a high potential identification pending the results of the peatland resource evaluation survey which is currently in progress.

As a general strategy for minerals and fossil fuels, the ministry will:

(i) Make available as much Crown land as possible for exploration while not interfering with other program interests.

(ii) Ensure mineral and fossil fuel values are evaluated before a permanent commitment of public land to uses incompatible with mining occurs. In areas where significant non-mineral values exist, the ministry will, where possible, permit exploration under controlled conditions before a permanent decision is made.

(iii) In conjunction with other government agencies, encourage industry to bring new deposits into production as soon as economic conditions permit, and encourage further domestic processing of ore.

(iv) Identify favourable geological areas which may be suitable for exploration, and expand the geoscience data base through collection, storage, and dissemination of information.

(v) Protect representative and outstanding geological features.

c. Resource Management Integration Guidelines

(i) Crown lands open to staking will continue to be available for mineral exploration, except where the needs of ministry programs justify the withdrawal of the area from staking.

(ii) Mineral resources staff will assist the parks program in the identification of earth science features of educational and scientific interest.

d. Plan Input and Review Guidelines

(i) The ministry, where appropriate, will provide information on the location of active or abandoned gas and oil wells to promote public safety.

(ii) The ministry will encourage municipalities to support mineral and fossil fuels exploration and extraction.

D: fisheries

1. OBJECTIVES

The general objective for fisheries management in southern Ontario is to provide opportunities for recreation and economic benefits consistent with the maintenance of healthy fish communities.

More specific objectives are:
Sport Fishing
- to meet demand within the limits of a wisely managed and rehabilitated resource.

Commercial Fishing
- to maintain a viable industry.

Bait Fishing
- to maintain current production.

Provincially Rare and Endangered Species
- to prevent the extinction of any native species.

2. TARGETS

The targets are:
Sport Fishing
- to provide 3,400,000 recreation opportunities annually by the year 2000.

Commercial Fishing
- to provide 36,290 kilograms (80,000 pounds) annually by the year 2000.

Bait Fishing
- to produce 60,000 dozen annually.

Provincially Rare and Endangered Species
- to ensure no native fish species becomes extinct.

3. RESOURCE ANALYSIS

Estimates of current production are based on intensive fisheries assessment programs in the district, including creel census and user surveys. Targets have been calculated using estimates of lake productivity, and lake and stream assessment information.

The sport fish target of 3,400,000 recreation opportunities(1) will require approximately 481,820 kilograms (1,062,200 pounds) of fish annually by the year 2000. The production needed to meet the sport fishing target has been categorized as shown in Table 5. The required production is 23% more than the current estimated annual production of 394,000 kilograms (870,000 pounds).

A major part of current fishing occurs in the warmwater inland lakes. The Kawartha Lakes are subject to intensive fishing pressure for the preferred species, yellow pickerel. Lake Ontario has great potential for rehabilitation; however, in the Lindsay District, physical conditions such as exposed shoreline, limited littoral zone and poor access may limit expansion of the sport fishery. Estimates of lake productivity suggest that potential production from the inland lakes, which will continue to supply most of the angling in the district, will be about 460,000 kilograms (one million pounds). With production from the coldwater streams, warmwater streams, and Lake Ontario, the assigned target for sport fish production should be achievable by the year 2000. Increased angler harvest of panfish and coarse fish species in the inland waters, and expansion of coldwater fisheries in Lake Ontario and tributaries will contribute to meeting the sport fish target.

The Lindsay District contains some of the most important trout streams on the north shore of Lake Ontario. Ultimately the angler demand across southern Ontario for coldwater fish will exceed the capacity to produce. That situation currently exists in some areas. To mitigate this situation, coldwater fisheries resources have to be protected, and where necessary, rehabilitated.

Current and estimated potential production of commercial fisheries are roughly in line with the

---

(1) It is assumed that one angler-hour constitutes one opportunity.

targets: In 1979, 36,290 kilograms (80,000 pounds) of commercial fish were harvested, and the target proposes maintaining this level.

Commercial fishing in Lindsay District is primarily a winter gill-net fishery for carp in several of the Kawartha Lakes. Provided good public relations can be maintained with anglers and other users, and the market remains favourable, this harvest level should not decline significantly. An experimental hoop net fishery on Rice Lake also harvests bullheads, suckers and a small quantity of panfish on a quota basis. In the longer term, as Lake Ontario rehabilitation proceeds, the insignificant commercial harvest from that portion of the lake in Lindsay District may increase. The commercial fishery will be directed toward harvesting species that are not sought by sport fishermen or stocks that are not accessible to anglers.

The allocation of the allowable harvest of the fisheries resource among user groups will be based on an objective, careful examination of all relevant biological, social, and economic factors to ensure that the optimum benefits accrue to the residents of Ontario. It is the responsibility of both anglers and commercial fishermen to participate in co-operative management and adhere to their catch limits, quotas and the regulations to protect the fish stocks and guarantee their perpetuation for the future.

There are wide fluctuations in the reported annual bait fish harvest, and it is hoped that changes in the reporting method will improve the accuracy of these reports. Average production over the 1978-79 period was 47,000 dozen bait fish. New bait fish licences are not being issued in the district. Nevertheless, it is estimated that the target of 60,000 dozen bait fish per year can be met.

TABLE 5 BREAKDOWN OF POTENTIAL SPORT FISH PRODUCTION

Types of Fishery	Estimated Production Required to Meet Target kg	lb.
Coldwater Streams	1,000	2,200
Coldwater Lakes (Lake Ontario)	13,610	30,000
Warmwater Streams	4,540	10,000
Warmwater Lakes	462,670	1,020,000
Total	481,820	1,062,200

TABLE 6 SUMMARY OF FISHERIES TARGETS

Product	Target for Annual Production (Year 2000)	Current Annual Production
Commercial Fish	36,000 kg (80,000 lb)	36,000 kg (80,000 lb)
Bait Fish	60,000 doz	47,000 doz
Sport Fish	3,400,000 opportunities(1)	2,800,000 occasions(1)

(1) assuming that one angler-hour constitutes one occasion.

4. PROGRAM STRATEGY

a. Contribution to General Policies

Public Safety

- assist in the monitoring of contaminant levels in fish.

Environment

- manage fish on the basis of aquatic communities rather than single species;
- identify and protect the habitat of rare or endangered fish species should any be identified in the district; and
- prepare and implement class and individual environmental assessments where required.

The fisheries program's contribution to the integrated resource management policy is outlined in section c, Resource Management Integration Guidelines.

b. Important Resource Areas and Area Strategies

Within the Central Region, Lindsay District has a relatively large quantity of productive warmwater lakes and rivers and coldwater streams. The primary factor in selecting important areas for fisheries was the productivity of the fishery in recent years. Other important considerations were the existing or projected future stresses on the fishery, the potential for rehabilitation, and the ease of access by the public.

Important areas for the fisheries program are shown on Map 5. These areas can be categorized as follows:

(i) The Kawartha Lakes
(ii) Selected coldwater streams
(iii) The Belmont Township lakes
(iv) Lake Ontario
(v) Selected other waters
(vi) Provincial fishing areas and fish hatcheries

(i) Kawartha Lakes The chain of lakes from Canal Lake to Rice Lake, including Lake Scugog, the Trent River, and the other connecting waters, provides the most important fisheries resource in the district, and one of the most significant warmwater sport fisheries in Ontario. The sought after species include yellow pickerel, muskellunge, smallmouth and largemouth bass, yellow perch, and panfish. In addition, the lakes support a small commercial fishery based on carp, and much of the local bait fish industry relates to the Kawarthas.

The ministry's major new fisheries management initiatives, including yellow pickerel harvest controls, and fish habitat protection and improvement, are intended to reduce stress on Kawartha fish populations, and achieve a high quality sport fishery over the long term.

The Kawarthas are recognized in the Federal-Provincial Canada-Ontario Rideau, Trent-Severn Study, the Kawartha Development Strategy, and the environmental stance taken in a number of municipal official plans. The importance of features such as fish spawning beds, marshes, and the adverse impacts of pollution and unsatisfactory sewage disposal are now widely recognized. Most municipalities look to the provincial ministries to assist them in setting standards for development, and co-ordinating planning around the lakes. Each lake has a large seasonal and permanent residential population as well as a commercial sector which is concerned with the management of the Kawartha Lakes fishery.

(ii) Selected coldwater streams The headwaters of almost every major trout stream in the Lindsay District rise along the Oak Ridges Moraine. The best trout streams occur south of the moraine, in the east half of the district. Wilmot Creek, Ganaraska River, and Shelter Valley Creek are excellent cold water streams, hosting large runs of rainbow and brown trout from Lake Ontario as well as resident trout populations. Other productive trout streams in this part of the district include the Bowmanville Creek, Soper Creek, parts of Graham Creek, Port Britain Creek, Cobourg Brook, Barnum House Creek, and Lakeport Creek. A few streams farther west such as the Oshawa, Farewell, Black, and Lynde Creeks are locally important and have potential for improvement. North of the moraine, the upper reaches of the Pigeon, Fleetwood, Baxter, Cavan, Jackson, Plato Creeks, and Ouse River support fisheries for resident brook and/or brown trout.

Emphasis on trout stream management will be placed on habitat protection and enhancement, ensuring effective regulation enforcement, and providing additional angling opportunities where anadromous fish stocks can support additional harvest.

Farming is the main rural land use in this area. District staff recognize the need for close cooperation with private landowners and the Ministry of Agriculture and Food in order to minimize adverse impacts on watercourses that are important to the fisheries program.

Most municipal official plans show the valleys of the coldwater streams (as well as other streams) as hazard land due to the risk of flooding, although there is not often specific recognition of the fishery, or the headwaters. Official plans which come closest to recognizing a natural resource value in the watershed usually use the concept of a green belt, or major open space. Ministry staff will attempt to ensure that municipal planning documents recognize the important coldwater streams in Lindsay District, and protect them from incompatible land uses.

(iii) The Belmont Township lakes Belmont, Round, Cordova and Crowe Lakes support angling for yellow pickerel, smallmouth and largemouth bass, muskellunge and panfish. Like the Kawarthas, these lakes have sizeable cottage populations, and some critical areas such as marshes could be threatened by further development. The Seven Links Official Plan has policies to restrict development in flood susceptible locations, thereby assisting in the protection of fisheries habitat. General fisheries management strategies will be similar to those for the Kawartha Lakes.

Map 5

LINDSAY DISTRICT

FISHERIES

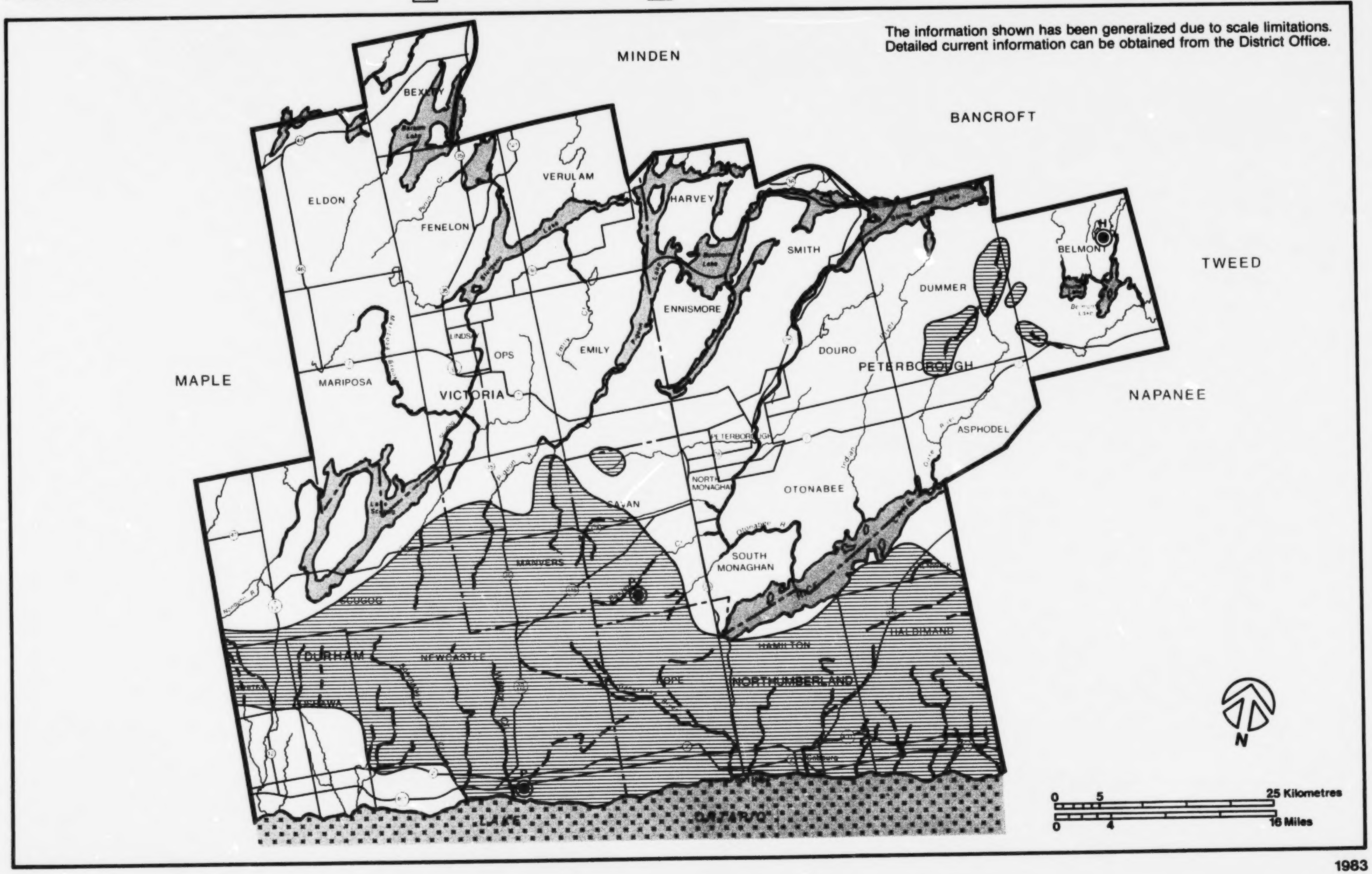
LEGEND

- Township Boundary
- County or Regional Boundary
- MNR District Boundary

Important Fisheries

- Cold Water Stream
- Warm Water Lake
- Warm Water Stream
- Cold and Warm Water Lakes
- H Hatchery
- P Provincial Fishing Areas
- Coldwater Watershed

The information shown has been generalized due to scale limitations. Detailed current information can be obtained from the District Office.


MINDEN
BANCROFT
TWEED
NAPANEE
MAPLE
BEXLEY
ELDON
FENELON
VERULAM
HARVEY
SMITH
ENNISMORE
DUMMER
BELMONT
DOURO
PETERBOROUGH
OPS
EMILY
LINDSAY
MARIPOSA
VICTORIA
ASPHODEL
PETERBOROUGH
NORTH MONAGHAN
OTONABEE
CAVAN
SOUTH MONAGHAN
MANVERS
SCUGOG
DURHAM
NEWCASTLE
HOPE
HAMILTON
HALDIMAND
NORTHUMBERLAND
OSHAWA
LAKE ONTARIO
N
0 5 25 Kilometres
0 4 16 Miles

1983

(iv) Lake Ontario At the present time much of the Lake Ontario sport fishery occurs in the tributary coldwater streams for rainbow trout, brown and brook trout, and Pacific salmon, or at stream mouths for trout and smelt. The Lake Ontario commercial fishery based in Lindsay District is dormant. While sport fishing on the open lake is not a major activity at present, considerable potential exists for expansion of the Lake Ontario fishery as rehabilitation of fish stocks progresses. Large plantings of lake trout have been made in the Port Hope area as part of the overall strategy to rehabilitate this species in Lake Ontario.

There is a common perception that the Lake Ontario fishery has been lost due to water pollution and contamination of fish. While rehabilitation of the lake will take a long time, like most natural resources management programs the long term results could be extremely important. The federal, provincial and American governments have expressed various levels of concern about Great Lakes water quality and fisheries. At a local level, municipalities do not perceive it as being in their responsibility or jurisdiction, although most official plans do show shoreline marshes appropriately as hazard lands.

To further protect the fisheries resources, the ministry is working with American jurisdictions to ensure that balanced harvests of fish stocks are assured and management strategies are compatible.

(v) Selected other waters There are numerous streams in the district which do not presently support major sport fisheries. Several Lake Ontario tributaries such as the Oshawa Creek, Lynde Creek, and Farewell Creek may have potential for rehabilitation. Several large tributaries of the Kawartha Lakes such as the Nonquon River, Mariposa Brook, Indian River, and Ouse River support spawning by muskellunge and other warmwater species and contribute angling benefits. Regardless of their fisheries potential, waters such as these present flood hazards to development and their valleys are usually shown as hazard land in official plans. The green belt thus created provides a long term possibility of improving their fisheries.

The ministry will encourage the adoption of official plan policies and zoning which will assist in the protection and rehabilitation of important spawning areas in these waters.

(vi) Provincial fishing areas and fish hatcheries There are two provincial fishing areas in Lindsay District, Wilmot Creek Provincial Fishing Area, and Millbrook Provincial Fishing Area. Both are heavily used. Management of the Wilmot Creek area will concentrate on habitat improvement for anadromous trout, and the provision of public access for anglers. Operation of the Millbrook area is based primarily on the stocking of hatchery-reared "catchable" size trout. Both properties are owned by the Crown and appropriately shown in local zoning by-laws.

The Deer Lake Fish Hatchery north of Havelock is the only facility producing muskellunge fry and fingerlings in Ontario. It requires high quality water and relies on marsh-spawning brook stock in Stoney Lake for a supply of spawn. The area upstream from the hatchery does not have severe development pressure. The land use designations in the Seven Links Official Plan are compatible with the hatchery, but the Stoney Lake marshes could be jeopardized by potential shoreline dredging and development. Although dredging and filling are regulated to some extent by the Ministry of Natural Resources and the Federal Government, discussions have taken place with the North Kawartha Planning Board and Burleigh Township to seek their assistance in protecting this resource.

To assist in achieving provincial fisheries objectives, the ministry is establishing a second fish hatchery in the district at Harwood, south of Rice Lake. This will be a coldwater facility concentrating on the rearing of trout.

c. Resource Management Integration Guidelines

(i) In administering approvals under the *Lakes and Rivers Improvement Act, Fisheries Act, Beds of Navigable Waters Act* and similar legislation, the ministry will seek to protect critical fisheries habitat areas such as spawning and nursery areas in marshes, shoals, and coldwater streams.

(ii) All fisheries management plans will be circulated to the other district programs for review and comment.

(iii) Fisheries management in provincial parks must conform to master plans and provincial parks planning and management policies. Fisheries management in candidate parks will occur within the framework of approved management guidelines.

(iv) Fisheries management proposals for significant areas of natural and scientific interest will be reviewed with parks staff.

(v) Fisheries staff will identify areas where tree planting should be carried out to protect or enhance stream habitat, and work closely with forestry staff to ensure fisheries values are incorporated in planting and other forest management activities.

(vi) Wherever practical, fisheries management areas and other fisheries projects will incorporate other resource management benefits.

d. External Co-ordination Guidelines

(i) Official plan and zoning policies will be reviewed by the ministry before decisions are made on fisheries habitat management.

(ii) Municipalities will be encouraged to provide fishing access points along the Great Lakes shoreline and within urban areas along streams.

(iii) The ministry will work with conservation authorities and other public agencies to encourage and assist fisheries management on their properties. The ministry will also seek to carry out fisheries management programs on private lands in cooperation with landowners, conservation authorities, and private groups.

(iv) Conservation authorities will be encouraged to work closely with the district office in the development of all water management plans. Authority/district liaison at the beginning of project/program planning will help streamline regional approval of projects and avoid potential conflicts with district programs.

(v) Conservation authorities will be encouraged to review and comment on draft fisheries management plans prepared by the district.

(vi) District fisheries staff will work closely with local conservation authorities in fisheries management planning to ensure that fisheries management and water management are co-ordinated.

(vii) Fisheries staff will work with the Ministry of the Environment to ensure that the protection of the groundwater regime receives special attention in important watersheds.

(viii) District staff will work with the Ministry of Agriculture and Food and landowners to minimize conflicts between fisheries concerns and agricultural interests. For example, where streams with significant sports fisheries are also identified as municipal drains under the *Drainage Act*, the ministry will consult with the Ministry of Agriculture and Food regarding any fisheries management proposals.

e. Plan Input and Review Guidelines

(i) The ministry will encourage the adoption of official plan policies which identify important fish habitat and protect it from incompatible development. Policies should also ensure that any land use activities occurring within or adjacent to fish habitat are carried out in a manner that keeps adverse effects to a minimum.

(ii) The ministry will encourage the adoption of zoning by-laws which:

- permit fisheries management in or adjacent to all lakes or rivers; and
- ensure activities adjacent to fishery resource areas are compatible with fish habitat management.

(iii) The ministry will provide information on existing and potential fisheries habitat and the potential impact of development on fisheries.

(iv) The ministry will review development proposals and encourage the incorporation of design features which remove or minimize any adverse effects on the fish habitat, and which maintain or provide access to high quality sport, commercial, or bait fish resource areas.

(v) The ministry will encourage:

- the inclusion of water access points in shoreline development plans; and
- land use management policies which recognize the potential of recreational and commercial fisheries.

(vi) Specific development that require waterbody alterations such as diversions or filling should be accompanied by detailed plans under the *Lakes and Rivers Improvement Act*.

E: wildlife

1. OBJECTIVES

The objective for wildlife management in southern Ontario is to provide opportunities for social and economic benefits from wildlife recreation and fur harvest consistent with the maintenance of healthy wildlife populations.

More specific objectives are:
Hunting

- to provide opportunities sufficient to maintain the present rate of participation and to maintain or improve quality of hunting by residents;
- to maintain the contribution to the economy of hunting by non-residents.

Trapping

- to sustain the maximum yield from wild furbearer populations while maintaining the present diversity of fur types.

Other Uses

- to prevent additional species from becoming endangered or threatened;
- to improve the status of existing endangered or threatened species with the objective of removing them from the endangered species list;
- to maintain populations of all wildlife species (both non-game and game) at levels sufficient to:
  - provide opportunities for recreational enjoyment, aesthetic appreciation, scientific investigation, and educational uses;
  - provide benefits from tourism;
  - ensure environmental quality and ecosystem integrity;
  - ensure the safety of the public.

2. TARGETS

The targets in Lindsay District are:
Hunting

- to provide by the year 2000, 169,000 opportunities of hunting recreation annually, comprising 18,700 opportunities of big game hunting, 105,600 opportunities of small game hunting, and 44,700 opportunities of waterfowl hunting.

Trapping

- to manage populations of wild furbearers such that an average annual harvest of 31,900 pelts can be achieved by the year 2000 while maintaining present species diversity.

Other Uses

- to ensure no native wildlife species becomes extinct.

A target for wildlife viewing has not been included due to the difficulty of measuring this activity and of assessing the influence of management actions. Viewing targets will be defined through ongoing policy development and will be incorporated into the *Land Use Guidelines* at an appropriate opportunity.

3. RESOURCE ANALYSIS

Wildlife production, and the size and status of wildlife populations are difficult to measure. Targets in the *Southern Ontario Co-ordinated Program Strategy* were derived from projected rates of wildlife activities, and the resulting figures were allocated to each district according to its proportion of previous activity. A summary of targets and production levels is given in Table 7.

The wildlife targets are broken down into small game hunting, waterfowl hunting, big game hunting, and trapping. The targets would allow a significant increase in hunting participation in the district. The diverse productive habitat in the district makes the small game target achievable, from a production standpoint. Social factors, such as the posting of private lands, could make it difficult to attain the target. The big game target provides for a significant increase in archery participation, but will require wildlife management initiatives such as habitat improvement and selective harvest regulations. The waterfowl target appears to be attainable.

Most of the hunting recreation occurs on private land or on the inland lakes. Several Crown properties are managed primarily for wildlife, most notably the Nonquon Wildlife Area near

TABLE 7 SUMMARY OF WILDLIFE TARGETS

Product	Target (Opportunities) (Year 2000)	Current Participation[1] (Occasions)
Small game hunting	105,600	59,690
Big game hunting	18,700	7,246
Waterfowl hunting	44,700	39,572
Total hunting	169,000	106,463
Trapping	31,900 pelts	32,054 pelts

(1) 1979-80 figures for Lindsay District derived from statistics listed by county. Proportions of counties in Lindsay District were applied to total county figures.

Port Perry, the McLarens Creek area near Lindsay, and to some extent, the property on Scugog Island. However, the net contribution of these properties to the total wildlife production in the district is relatively small. Their main function is to protect strategic habitat and to provide access to the public for hunting, study, and viewing. In addition, the ministry undertakes various wildlife management and habitat improvement projects on these properties.

The loss of habitat to land development potentially has the most far-reaching impact on wildlife production; however, social constraints such as posting of private lands against trespass could seriously limit participation in wildlife-based recreation. Encouraging responsible attitudes by hunters will be important because they influence anti-hunting attitudes, firearms by-laws, and the posting of private land. Other natural resources programs do not appear to impose any serious long term constraints on wildlife. Tentatively, it is projected that the assigned targets can be met.

4. PROGRAM STRATEGY

a. Contribution to General Policies

Public Safety

- promote the hunter education program;
- enforce hunting regulations; and
- participate in rabies suppression programs.

Environment

- protect the habitat of rare or endangered wildlife species should any be identified in the district;
- identify and seek to protect significant wetlands, and ensure that their values are given recognition in planning;
- prepare and implement class and individual environmental assessments as required.

The wildlife program's contribution to the integrated resource management policy is outlined in section c, Resource Management Integration Guidelines.

b. Important Resource Areas and Area Strategies

The most important areas (numbers i-iv below) were identified primarily because they are significant for waterfowl, furbearers, or as deer wintering areas. These species have quite specific and limited habitat requirements, and their habitat is most susceptible to destruction from improper management.

Many species of upland wildlife also occur in Lindsay District but their habitat is so widespread that specific important resource areas are difficult to identify. For species such as ruffed grouse, cottontail rabbit, snowshoe hare, European hare, and American woodcock, suitable habitat exists in scattered locations in many parts of Lindsay District. Retention of small woodlots, stream valleys, fence rows, and thickets, wherever possible throughout the district is a more sensible approach than to identify geographic locations on the map. Nevertheless certain parts of the district (numbers v-viii below) have been identified because they contain a valuable mix of diverse wildlife resources.

The important areas for wildlife in Lindsay District are:

(i) The Kawartha Lakes, Belmont Township lakes, and their shoreline marshes
(ii) Lake Ontario and its shoreline marshes
(iii) Major inland marshes and wetlands
(iv) Deer winter concentration areas
(v) Large tracts of forest and valleys in the central part of the district
(vi) Oak Ridges Moraine
(vii) Hope, Hamilton, and Haldimand Townships
(viii) Provincial wildlife management areas

The important resource areas i-iv and viii are shown on Map 6.

Map 6

LINDSAY DISTRICT

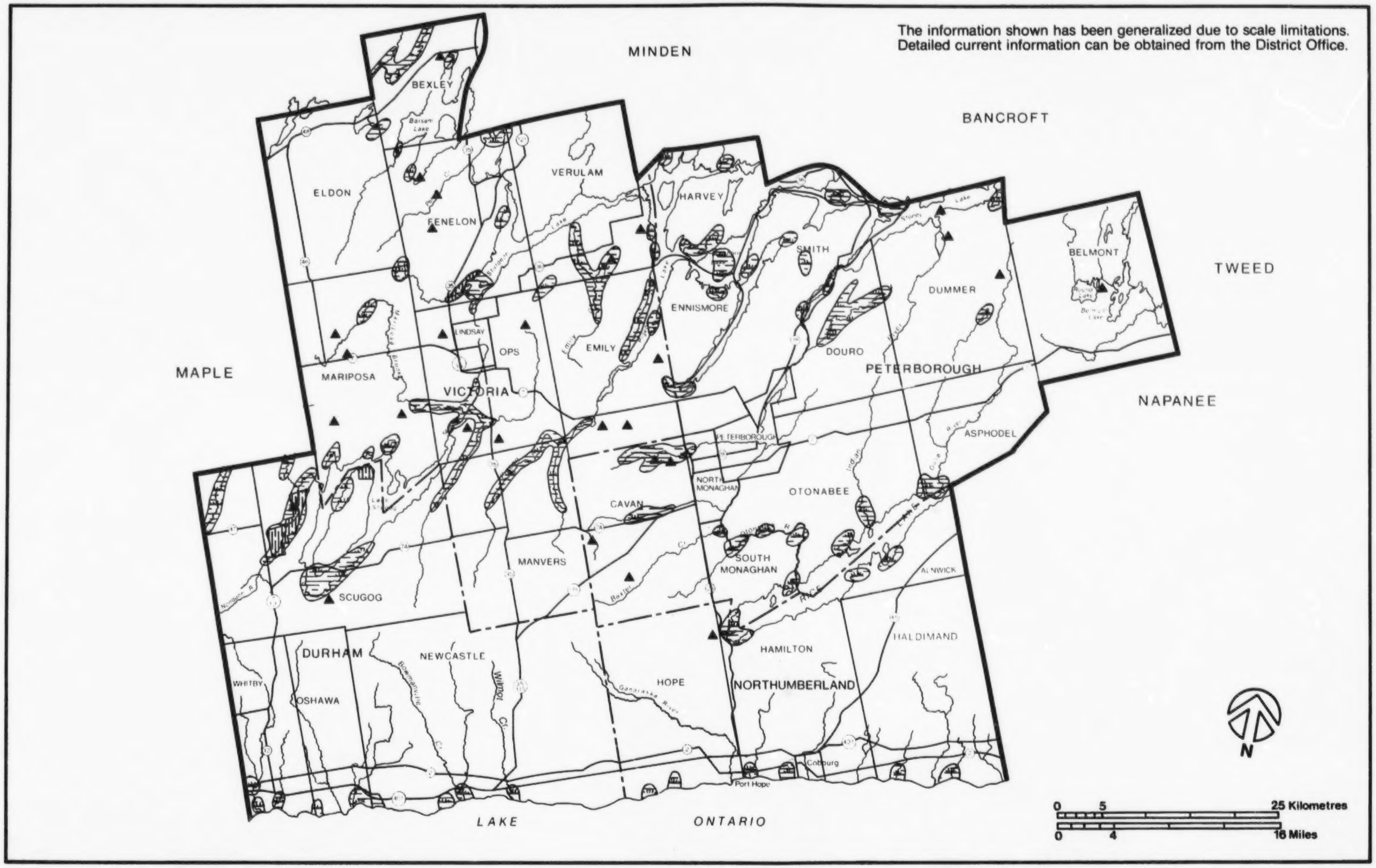
WILDLIFE

LEGEND

- ☐ Township Boundary
- ⬚ County or Regional Boundary
- ▭ MNR District Boundary

Important Resource Areas

- ▲ Winter Deer Concentration Area
- ▤ Wetlands
- ▥ Wildlife Management Area


MINDEN
BANCROFT
TWEED
NAPANEE
MAPLE
BEXLEY
Balsam Lake
ELDON
FENELON
VERULAM
HARVEY
SMITH
ENNISMORE
DUMMER
BELMONT
LINDSAY
OPS
EMILY
MARIPOSA
VICTORIA
DOURO
PETERBOROUGH
ASPHODEL
NORTH MONAGHAN
OTONABEE
CAVAN
MANVERS
SOUTH MONAGHAN
ALNWICK
SCUGOG
DURHAM
NEWCASTLE
HOPE
HAMILTON
HALDIMAND
NORTHUMBERLAND
WHITBY
OSHAWA
Cobourg
Port Hope
Ganaraska River
Wilmot Cr.
Rice Lake
Stoney Lake
LAKE ONTARIO
N
0 5 25 Kilometres
0 4 16 Miles

The information shown has been generalized due to scale limitations. Detailed current information can be obtained from the District Office.

1983

(i) Kawartha Lakes, Belmont Township lakes, and their shoreline marshes The marshes on the inland lakes are extremely important habitat for waterfowl and furbearing animals, and have major importance for related programs such as fisheries and outdoor recreation.

The Kawartha Lakes fishery sometimes overshadows the importance of these lakes for wildlife in discussions with agencies outside the ministry. However, fish and wildlife requirements are closely related, and the recognition given to shoreline marshes in the Kawartha Development Strategy, the Canada-Ontario Rideau, Trent-Severn Study, and some municipal official plans, also benefits wildlife. As the area is largely privately owned, including many important marshes, a major part of wildlife management in the area is to regulate dredging and filling. This emphasis on protection of wetlands in the Kawarthas and other parts of the district must continue in order to sustain the fish and wildlife resource.

The ministry will encourage the recognition of all wetland values in the municipal planning process, and the planning of other agencies. This strategy also applies to the following two important resource areas.

(ii) Lake Ontario and its shoreline marshes Many of the best Lake Ontario marshes are at the mouths of streams, for example Oshawa Second Marsh and Bowmanville Marsh. There are small but productive waterfowl marshes farther east as well.

The Central Lake Ontario Conservation Authority owns several marshes on Lake Ontario. Several of the other marshes are under pressure for development, and the conflict between harbour development and marshland conservation will likely continue. Although most municipal official plans show shoreline marshes as hazard land, major projects with suitable engineering can usually render part of the area suitable for development, and jeopardize wetland. Municipal plans typically contain a general statement supporting the environment, but have little specific reference to marshland values.

(iii) Major inland marshes and wetlands The important inland marshes such as Emily Lake, Goose Lake in Mariposa, Rotten Lake, and Buckley Lake are primarily valuable for waterfowl and furbearers. Some of the largest and most important wetlands occur in stream valleys of tributaries to the Kawarthas, such as Emily Creek, Nonquon River, Beaverton River, Pigeon Creek, and the Indian River. Many of these have adjacent areas of cedar swamp or hardwoods which are valuable for deer or other upland wildlife. Most of the inland marshes are shown in municipal plans as hazard land, and are not attractive for building. However, they are often perceived as wasteland, which can lead to disruption by unauthorized dumping or drainage. Depending on the economic climate, disruption by mining for marl or peat is a possibility.

(iv) Deer winter concentration areas Although white-tailed deer are common throughout the Lindsay District, there are few large deer winter concentration areas. The Dummer deer area is the largest and most important deer wintering area in the district at the present time. Most of this area is shown as recreational in the Seven Links official plan, a designation which permits estate and seasonal development to take place.

In addition to the Dummer yard, there are several smaller winter deer concentration areas scattered across the district. Through rigorous enforcement of hunting regulations, and deer yard improvement projects such as cutting of openings and trails (using private landowner agreements as necessary), these winter concentration areas can be protected and enhanced.

(v) Forest and valley land in the central part of the district The woodlands along the Pigeon River, Baxter Creek, Eastcross Creek, and Fleetwood Creek are excellent deer and upland wildlife habitat, as well as wetlands which are valuable for various waterfowl and furbearers. The presence of this mix of species and habitats makes the area highly significant for wildlife.

Municipal official plans designate most of this area as agricultural. Through close cooperation with ministry staff, landowners, and the Ministry of Agriculture and Food, the potential conflicts with farming activities and wildlife habitat may be minimized, and habitat improved.

(vi) The Oak Ridges Moraine The large extent of the moraine, and the variety of vegetative cover types available make it potentially important for upland wildlife. The large forest tracts in the Ganaraska and Northumberland Agreement Forests, Kendal Recreation Area, and some conservation authority properties afford public access to wildlife for outdoor recreational pursuits.

The Region of Durham official plan designates most of the moraine in its jurisdiction as major open space. This designation permits a wide variety of land uses, but is an indication of the area's natural significance. Other official plans are not as specific, although the mineral resource protection policies in some official plans are probably beneficial to wildlife management as well.

(vii) Hope, Hamilton, and Haldimand Townships
These townships in Northumberland County contain numerous woodlots and stream valleys associated with a rich, primarily agricultural landscape. In addition to their value for deer and upland wildlife, most of the streams in these valleys support important coldwater fisheries. Agriculture is an important activity in the area. Most of the habitat areas are shown in official plans as rural, agriculture, or hazard land.

(viii) Provincial wildlife management areas
The Ministry of Natural Resources manages wildlife on several properties in Lindsay District. The Nonquon Wildlife Area is used for educational programs by the Durham Regional Board of Education, as well as providing wildlife-based recreation. Wildlife management is a major part of the ministry's program on the McLaren's Creek properties, and in the integrated resource management programs at the Kendal and Scugog Island properties. Although the provincial wildlife management areas do protect some of the strategic wildlife habitat in the district, their main roles are to provide public access to wildlife resources and to serve as demonstration areas for wildlife management techniques.

c. Resource Management Integration Guidelines

(i) Wildlife staff will develop criteria and management guidelines for forest management prescriptions that will enhance wildlife habitat.

(ii) District wildlife staff will prepare wildlife management plans for all wildlife management areas and wildlife agreement areas, and will circulate these to staff in other programs for review.

(iii) Significant wildlife management activities which will take place on an area where another program has mapped an interest will be circulated to the affected program(s) for review.

(iv) Any wildlife management in provincial parks will conform to master plans, and provincial parks planning and management policies. Any wildlife management in candidate parks will occur within the framework of approved management guidelines.

(v) Wildlife management proposals for significant areas of natural and scientific interest will be reviewed with parks staff.

(vi) Proposals for wildlife management on any Crown land will be circulated to lands staff for review.

d. External Co-ordination Guidelines

(i) Official plan and zoning policies will be reviewed before decisions are made on wildlife habitat management.

(ii) The ministry will offer assistance to municipalities in determining appropriate areas for application of "no discharge of firearms" by-laws.

(iii) The ministry will work cooperatively with government agencies at the federal, provincial and municipal levels, and with private landowners, developers, and other members of the private sector to achieve the protection of all wildlife resources (both game and non-game). Specific approaches will include:

- working with conservation authorities and other public agencies to encourage and assist wildlife management on their properties;
- encouraging greater non-government participation in the identification and management of wildlife habitat;
- providing habitat management consulting services to landowners; and
- entering into agreements with property owners to ensure habitat on private land is protected and properly managed.

(iv) The ministry will work with other agencies, groups, and individuals on programs that will encourage landowners to permit access to wildlife resources on private lands.

e. Plan Input and Review Guidelines

(i) The ministry will encourage the adoption of official plan policies which place wildlife management areas, important wetlands, and other critical wildlife habitat in a land use category that permits only uses compatible with wildlife protection.

(ii) The ministry will encourage the adoption of by-laws that:

- permit wildlife management, hunting, and trapping in all appropriate areas; and
- protect wildlife habitat by allowing only those uses which are compatible with wildlife production.

(iii) The ministry will review development proposals to ensure they:

- are compatible with the production and harvest of commercial fur;
- incorporate design features which remove or minimize adverse effects on habitat critical to target achievement; and
- maintain or provide access to high quality wildlife-oriented recreation areas essential to the fulfillment of program targets.

(iv) The ministry will provide information on existing wildlife habitat.

(v) Specific developments that require waterbody alterations such as diversions or filling should be accompanied by detailed plans for review under the *Lakes and Rivers Improvement Act.*

F: provincial parks

1. OBJECTIVES

The objectives for the provincial parks system in southern Ontario are:
Protection
- to protect provincially significant elements of the natural and cultural landscape of Ontario;

Heritage Appreciation
- to provide opportunities for exploration and appreciation of the outdoor natural and cultural heritage of Ontario;

Recreation
- to provide provincial park outdoor recreation opportunities ranging from high intensity day use to low intensity wilderness experiences; and

Tourism
- to provide Ontario's residents and out-of-province visitors with opportunities to discover and experience the distinctive regions of the province.

2. TARGETS

The targets for the provincial parks system in Lindsay District are:
Protection
- Earth Science to protect provincially significant, representative and special earth science features in Lindsay District which contribute to the representation of the thirty-five geological environments of southern Ontario;
- Life Science to protect provincially significant life science features in Lindsay District which contribute to the representation of each vegetative site type in the twenty-six site districts in southern Ontario;
- Historical Resources to protect provincially significant landscape-related prehistorical and historical resources which contribute to representation of the fourteen themes of southern Ontario's history;

Heritage Appreciation
- to provide opportunities for exploration and appreciation of the outdoor natural and cultural heritage of Lindsay District; and

Recreation and Tourism
- to provide annually, by the year 2000, the following recreation opportunities for residents and visitors to provincial parks in Lindsay District:

Day Use:
686,000 swimming opportunities
612,500 picnicking opportunities
Extended Use:
440,100 camping opportunities.

3. RESOURCE ANALYSIS

a. Protection

The Ministry of Natural Resources has protection targets related to earth and life science features and historical resources. To assist in achieving these targets, the ministry has identified areas of natural and scientific interest, which are areas of land and water containing natural landscapes or features that have values related to protection, natural heritage appreciation, scientific study, or education.

Areas of natural and scientific interest vary in level of significance. The most significant may contribute to the achievement of the ministry's protection objective. Areas of natural and scientific interest encourage the protection of additional areas not regulated as provincial parks and provide a focus for both the public and private sectors to contribute to the protection of Ontario's natural heritage.

In the Lindsay District, 26 significant earth science and 18 significant life science areas have been identified (Map 7).

The principle of representation for earth science features is to protect examples of features which illustrate Ontario's earth science history. Earth science features are physical elements of the natural landscape created by the earth's processes. They can be broadly categorized into rock strata, fossil assemblages, and landforms.

The selection of earth science areas of natural and scientific interest has focused on representing features that best illustrate various themes.

Table 8 lists the areas which have been identified to represent twelve earth science themes.

Life science representation is concerned with the protection of areas which characterize distinctive environments. In the Lindsay District, four distinct environments, called site districts, can be identified (see Map 7). In each of these site districts, a number of areas containing relatively undisturbed indigenous biotic communities and their associated flora and fauna have been identified for representation. Table 9 lists the areas.

Of the 44 significant earth and life science features listed in Tables 8 and 9, 2 are located within existing provincial parks, 9 are partially located on public land, and the remaining 33 are associated with land which is under private ownership. Target achievement is potentially more feasible on Crown and public land holdings. Nevertheless, natural areas on private land can be protected through the development of "other than park" mechanisms (e.g. private landowner agreements).

The type of protection each site requires will be variable, depending primarily on the sensitivity of the feature(s) to be protected. In the case of many earth science sites, a number of uses may be compatible with protection of the features, including intensive agriculture. In the case of particularly sensitive biological communities, protection from certain land uses may be highly desirable. The protection strategies and setting of priorities are subjects of continuing study.

The ministry proposes to protect a system of provincially significant archaeological and historical resources which represent each theme segment of Lindsay District's cultural history. However, specific historic targets have not yet been identified.

Historical themes to be represented in provincial parks overlap among districts and park properties. Serpent Mounds and Darlington Provincial Parks in Lindsay District now contribute to this target. Harris Island, a candidate park area which has already been added to Serpent Mounds Provincial Park, and Quackenbush candidate park contain archaeological resources which may also contribute to the historical objective. Numerous historical themes are unrepresented. After a more detailed examination of historic resources in the region, further allocation of historic representation targets will take place. The identification of areas of natural and scientific interest also contributes to the heritage appreciation objective.

b. Heritage Appreciation

Establishing natural environment and waterway classes of provincial parks in each of the site districts of southern Ontario is the principal means of representing the natural and cultural landscapes of southern Ontario. Opportunities to explore and appreciate these landscapes then can be provided through self-use facilities and visitor services programs.

The representation standard indicates that there should be a natural environment park in each of site districts 6-8 and 6-9. Because both of these site districts extend into other ministry districts, the representation may be provided elsewhere. There are no suitable candidates in site district 6-13, so this district will remain unrepresented.

There are no proposed waterway parks in Lindsay District. However, the Trent-Severn Waterway runs through site districts 6-7, 6-8 and 6-9, and will contribute to representation without the ministry having to establish a waterway provincial park. No suitable candidate can be identified in site district 6-13.

c. Recreation/tourism

The recreation targets (Table 11) relate only to opportunities within provincial parks. Other suppliers such as municipalities, conservation authorities, and commercial resorts are assumed to at least maintain their present proportion of the total supply. Camping, picnicking, and swimming have been selected as indicator activities. Other activities such as trails will be developed in association with them.

Currently, the district's six provincial parks provide a total of 1,263 campsites, 1,253 picnic tables, and 820 metres (2,700 ft.) of beach (Table 12). The targets will be met by developing some of the candidate parks the ministry now owns. Preliminary estimates, without master planning of each property, suggest that there is a potential supply of 1,620 campsites, 1,823 picnic tables, and 2,954 metres (9,692 ft.) of beach, if all the candidate parks with potential capacity were developed in addition to the existing parks.

This leaves a potential target variance of 240 campsites, 730 picnic sites and 670 metres (2,198 ft.) of beach. The ministry may consider the installation of an artificial swimming facility at Darlington Provincial Park to help make up the variance in the beach target. The establishment of a natural environment park in site district 6-8, which includes Lindsay District, is still a

TABLE 8 SIGNIFICANT AREAS OF NATURAL AND SCIENTIFIC INTEREST–EARTH SCIENCE

Theme	Representation in Provincial Parks	Representation in Candidate Parks	Other Sites (Crown, public and private lands)
Oak Ridges Moraine	—	—	1. Garden Hill pitted outwash, Hope Twp. 2. Fleetwood Kames, Manvers Twp. 3. Bethany crevasse fillings, Cavan Twp.
Lake Belleville	—	—	4. Lakeport, Haldimand Twp.
Lake Iroquois	—	—	5. Stephen's Gulch, Newcastle 6. Batterwood, Hope Twp.
Omemee Esker	—	—	7. Omemee Esker south, Emily-Manvers Twps.
Peterborough Drumlin Field	—	—	8. Jackson Creek Drumlins, North Monaghan Twp. 9. Villiers Drumlins, Otonabee Twp. 10. Meade Creek Drumlin, Otonabee Twp. 11. Jermyn Drumlin, Otonabee Twp. 12. Complex Drumlins, Dummer Twp. 13. Douro Stoss and Lee, Douro Twp. 14. Cameron Rock Drumlin, Fenelon Twp.
Verulam Formation	—	—	15. Peterborough North Quarry, Smith Twp. 16. Lakefield Quarry, Douro Twp. 17. Cobourg Hill no. 1 middle road cut, Eldon Twp. 18. Cobourg Hill no. 1 railway cut, Eldon Twp.
Lindsay Formation	—	—	19. Lindsay North road cut, Ops Twp.
Dummer Moraine	—	—	20. Dummer Moraine, Dummer Twp. 21. Lakefield crevasse fillings, Smith Twp.
Shadow Lake Formation	—	—	22. Deer Bay Creek road cut, Harvey Twp.
Bobcaygeon Formation	—	—	23. Little Bob Quarry, Verulam Twp. 24. Kirkfield Quarry, Eldon Twp.
Lake Algonquin	—	—	25. Kirkfield site, Eldon Twp.
Whitby Formation	—	—	26. Bowmanville Quarry, Newcastle

possibility. Should this occur in Lindsay District, this would contribute to meeting the recreation target.

A reduction in target variances may be achieved through increased efforts by the private sector and other agencies to supply a larger proportion of the total recreation target. If variances still exist, and funding permits, the ministry may acquire new lands for parks.

It is important to note that the recreation targets are based on estimates of future demand. Further analysis will be required to assess future public needs and recreation facilities.

4. PROGRAM STRATEGY

a. Contribution to General Policies

Environment

- identify and seek to protect representative or endangered elements of the natural and cultural landscape; and
- prepare and implement class and individual environmental assessments as required.

The contribution to the integrated resource management policy is covered in section c, Resource Management Integration Guidelines.

TABLE 9 SIGNIFICANT AREAS OF NATURAL AND SCIENTIFIC INTEREST—LIFE SCIENCE

Site District	Representation in Provincial Parks	Representation in Candidate Parks	Other Sites (Crown, public and private lands)
6-7	Peter's Woods Provincial Nature Reserve	—	1. Scugog Marsh, (Osler Tract), Lake Scugog 2. Fleetwood Creek Valley, Manvers Twp. 3. Millvalley Hills Forests, Haldimand Twp.
6-8	Harris Island, (Serpent Mounds Provincial Park), Rice Lake	—	5. Cavan Bog, Cavan Twp. 6. Goose Lake Wetlands, Eldon, Fenelon, Mariposa Twps. 7. Emily River Swamp, Emily-Verulam Twps.
6-9	—	—	8. Moore Lake, Smith Twp. 9. Dummer Swamp, Dummer Twp.
6-13	—	—	10. LeVay's Marsh (Cranberry or Eastbourne Marsh), Whitby 11. Oshawa Second Marsh, Oshawa 12. Carr Marsh, Hamilton Twp. 13. Clarke Summit Swamp, Newcastle 14. Soper Valley, Newcastle 15. Shelter Valley, Haldimand Twp. 16. Wesleyville Ravines, Hope Twp. 17. Bond Head Bluffs, Newcastle

TABLE 10 REPRESENTATION ACHIEVEMENT—WATERWAY AND NATURAL ENVIRONMENT CLASS PARKS

Site District	Waterway Park Representation	Natural Environment Park Representation
6-7	Target potentially met through CORTS Agreement on Trent-Severn Waterway	No target for Lindsay (Potential representation in Huronia District at Mono Cliffs candidate park)
6-8	As above	No candidates (Candidates to be searched for in Lindsay, Huronia, Maple, and Napanee Districts. Partial representation by Ferris Provincial Park.)
6-9	As above	Candidates—Wolf Island—Indian Point—Target potentially met (suitability as N.E. parks must be confirmed)
6-13	No candidate. (No suitable resources)	No suitable candidates. (Will not be represented.)

b. Important Resource Areas and Area Strategies

The selection of important areas for the parks program was strongly influenced by previous studies on parks system planning at both the provincial and regional level, and the Canada-Ontario Rideau, Trent-Severn Waterway. The location and potential of the existing parks was also a factor. Important areas for the parks program are shown on Map 7. These areas can be categorized as follows:

(i) The existing provincial parks: Balsam Lake,

Map 7

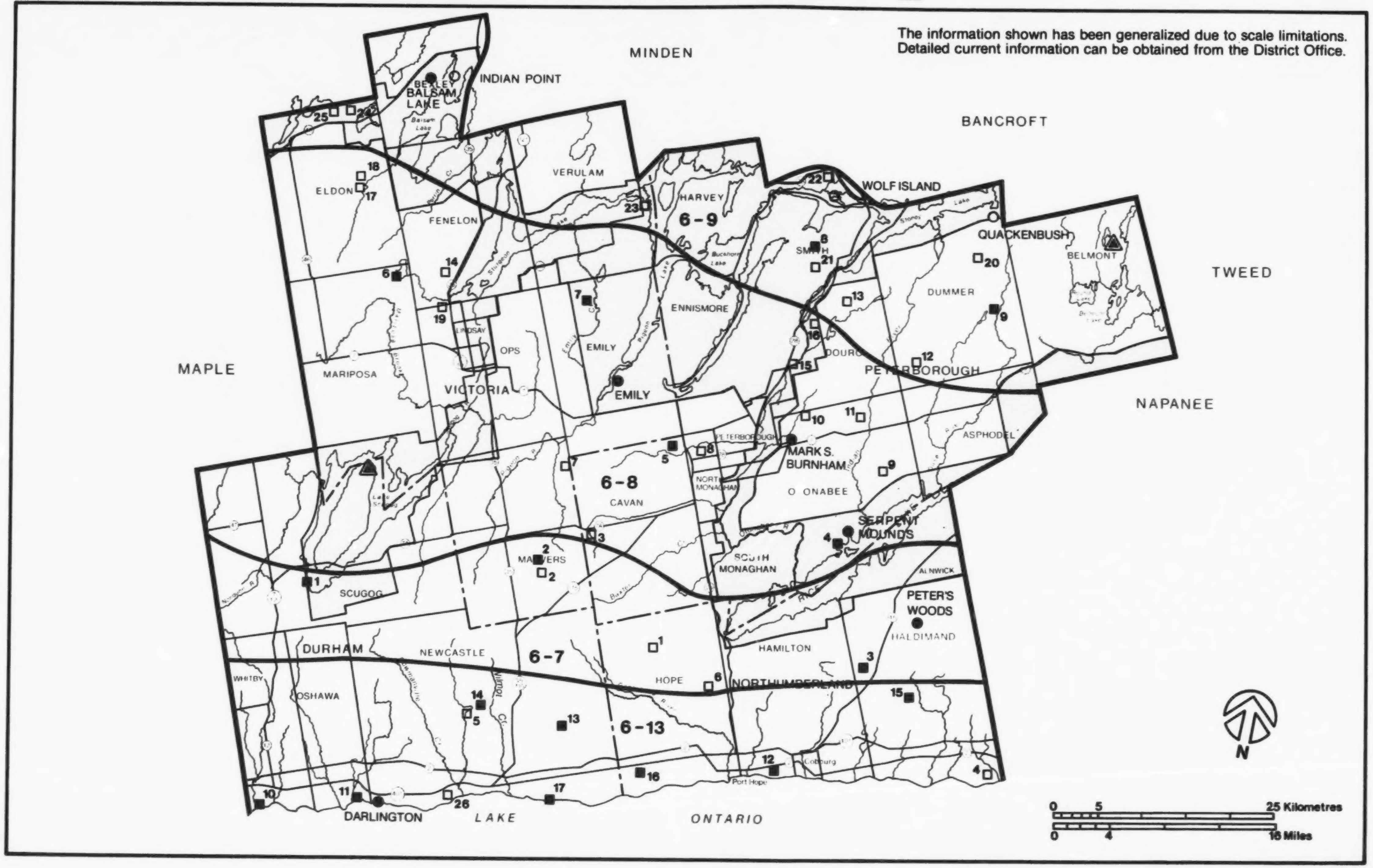
LINDSAY DISTRICT
PROVINCIAL PARKS AND RECREATION

LEGEND

- ⊟ Township Boundary
- - - - County or Regional Boundary
- ⊟ MNR District Boundary

Important Resource Areas

- ● Existing Provincial Park
- ○ Candidate Provincial Park
- ■¹ Areas of Natural and Scientific Interest — Life Science
- □¹ Areas of Natural and Scientific Interest — Earth Science
- 6-7 Site District Boundary and Number
- ▲ MNR Access Point
- ▨ Canada-Ontario Rideau, Trent-Severn Corridor



The information shown has been generalized due to scale limitations. Detailed current information can be obtained from the District Office.

MINDEN
INDIAN POINT
BEXLEY
BALSAM LAKE
Balsam Lake
BANCROFT
VERULAM
ELDON
FENELON
HARVEY
6-9
WOLF ISLAND
QUACKENBUSH
BELMONT
TWEED
SMITH
ENNISMORE
DUMMER
LINDSAY
OPS
EMILY
MARIPOSA
MAPLE
VICTORIA
EMILY
DOURO
PETERBOROUGH
NAPANEE
ASPHODEL
PETERBOROUGH
MARK S. BURNHAM
NORTH MONAGHAN
6-8
CAVAN
OTONABEE
SERPENT MOUNDS
MANVERS
SOUTH MONAGHAN
SCUGOG
ALNWICK
PETER'S WOODS
HALDIMAND
HAMILTON
DURHAM
NEWCASTLE
6-7
HOPE
NORTHUMBERLAND
WHITBY
OSHAWA
6-13
Port Hope
Cobourg
DARLINGTON
LAKE ONTARIO
0 5 25 Kilometres
0 4 16 Miles
N

1983

TABLE 11 PROVINCIAL PARKS' TARGETS FOR RECREATION

	Day Use				Extended Use	
	Total Opportunities		# of Picnic Tables	# Metres of Beach	# of Camping Opportunities	# of Campsites
	Picnicking	Swimming				
Total Target (2000)	612,500	686,000	2,550	3,620	440,100	1,860
Existing Opportunities (1982)	300,300	155,400	1,250	820	298,100	1,260
New Opportunities Required by 2000	312,200	530,600	1,300	2,800	142,000	600
Available Potentials						
• in existing parks (Harris Isl. in Serpent Mounds Park)	2,400(1)	nil	10(1)	—	nil	—
• in candidate parks						
Indian Point	120,100	403,600	500	2,130	82,800	350
Quackenbush	2,400	nil	10	—	—	—
Wolf Island	12,000(1)	nil	50(1)	—	2,400(1)	10(1)
Total Potential	136,900	403,600	570	2,130	85,200	360
Target Variances	175,300	127,000	730	670	56,800	240

(1) Boat access only

TABLE 12 EXISTING PROVINCIAL PARKS

Park: Classification and Size	# Campsites	# Picnic Tables	Beach
Balsam Lake: Recreation 425 ha (1050 ac)	483	216	340 m (1115 ft)
Emily: Recreation 83 ha (205 ac)	299	200	133 m (436 ft)
Serpent Mounds: Natural Environment 135 ha (334 ac)	113	289	199 m (652 ft)
Darlington: Recreation 153 ha (378 ac)	368	518	152 m (498 ft)
Mark S. Burnham: Recreation 39 ha (97 ac)	nil	30	nil
Peter's Woods: Nature Reserve 34 ha (83 ac)	nil	10	nil
	1263	1253	824 m (2703 ft)

Darlington, Emily, Mark S. Burnham, Serpent Mounds, and Peter's Woods;

(ii) Candidate provincial parks: Indian Point, Wolf Island, and Quackenbush;

(iii) Significant areas of natural and scientific interest; and

(iv) The Canada-Ontario Rideau, Trent-Severn Waterway corridor.

(i) The existing provincial parks The ministry will continue to operate the existing provincial parks in the district. With the exception of Peter's Woods, which is a nature reserve, these parks will provide a large proportion of the ministry's recreation program in the Lindsay District. No significant expansion of the recreation facilities in these parks is possible without lowering the quality of service and environment, so management will consist primarily of maintenance and operation as at present.

Each of these provincial parks is well established, and appropriately shown in municipal plans and zoning by-laws. With the possible exception of Peter's Woods, each park is surrounded by existing private developments and land subject to residential and commercial development pressure. Serpent Mounds is on land leased from the Hiawatha Indian Reserve. The ministry hopes to re-negotiate this lease when it expires in 1995.

Much of Harris Island in Rice Lake, which has recently been added to Serpent Mounds Provincial Park, is representative of shoreline marshes and submerged drumlins in that area. It also contains archaeological artifacts. Little or no actual development will take place on the property.

Peter's Woods Provincial Park is the only nature reserve in Lindsay District at the present time. This property is primarily intended to preserve a representative sample of relatively undisturbed forest on the Oak Ridges Moraine. Very few recreational facilities are provided as the primary use of the area is scientific and nature study.

(ii) Candidate provincial parks Indian Point and Wolf Island have been identified as candidate natural environment provincial parks. These properties will be managed to ensure the opportunity exists to establish a provincial park, should this become desirable and necessary.

Of these, Indian Point has the greatest potential for meeting the recreation targets. It is estimated that Indian Point may be able to supply 350-400 of the 600 additional campsites, 500 of the 1,300 additional picnic sites, and 2,130 metres (6,990 ft.) of the additional beach. It is important to note however, that these targets are only estimated and may change with time and recreational demands. Further analysis coupled with public participation through the park master planning process will guide any proposed development for Indian Point.

Wolf Island is proposed as a natural environment class park which will include low intensity recreation and environmental protection.

Quackenbush candidate park contains archaeological artifacts. Like Harris Island, little or no development will take place here.

Current measures of the recreation potentials of the candidate parks, and the proposed classifications, will require verification through more detailed planning. At this time, it is premature to dictate when and what type of development will occur. Such detailed planning would seek public comment and input prior to any development that might occur. The master planning process used by the ministry includes liaison with the municipality and neighbouring property owners, and should ensure a mutually satisfactory relationship. Most municipalities in the Lindsay District place proposed parkland in the same open space category as provincial parks, which would permit park development on the property. Detailed liaison about park planning and services will take place at the time of development on each property.

(iii) Significant areas of natural and scientific interest To achieve the protection target, the 44 areas of significance identified in Tables 8 and 9 will be considered as important resource areas. The types and amounts of uses that are appropriate on these areas will vary according to the significance and sensitivity of each area. A more detailed level of planning will determine this information for each natural area.

Where areas of natural and scientific interest occur on public land managed by the Ministry of Natural Resources, the ministry will ensure that the land uses and activities which occur provide for the protection of the identified values.

Two areas of natural and scientific interest, Cavan Bog and Cranberry Marsh, are partially on properties now owned by the Otonabee Region Conservation Authority and the Central Lake Ontario Conservation Authority respectively. The conservation authorities are aware of the significance of these areas, and do not plan any major activities which would seriously disturb them.

On private lands the ministry will, through cooperation with others, attempt to ensure that landowners are aware of significant features on their properties and seek the owner's cooperation in protecting such features. The identification of areas of natural and scientific interest on private land does not indicate an intent of the ministry to acquire this land or to restrain or prevent any private use of land.

Strategies for protecting significant areas of natural and scientific interest could include:

- establishing agreements with willing landowners that would guarantee appropriate management practices;
- where a property is owned by another public agency, negotiating for management prescriptions which would protect the feature(s) on the site; and
- encourage supportive municipal policies.

(iv) The Canada-Ontario Rideau, Trent-Severn Corridor The CORTS corridor, which includes the Trent Waterway, is significant to many natural resource programs in Lindsay District, and helps achieve representation of waterways without the creation of a new park. Three of the six existing provincial parks and the three candidate parks are in this area.

The Ministry of Natural Resources was one of the founding agencies in the Federal-Provincial CORTS Agreement which has studied the recreation possibilities of the Rideau, Trent and Severn River systems; the ministry will take an active role in its implementation.

c. Resource Management Integration Guidelines
(i) All programs will be considered during the development and review of park master plans and management plans.

(ii) Where possible, provincial parks will contribute to the achievement of the objectives of other programs.

(iii) Management guidelines will be prepared for each candidate park. The management guidelines will identify:
- park values to be protected;
- the resource management prescriptions necessary to protect those values; and
- restrictions on use.

d. External Co-ordination Guidelines
(i) The ministry will encourage the development of a balanced recreation system by promoting improved co-ordination among the ministry, conservation authorities, municipalities, other public agencies, and the private sector.

(ii) The ministry will promote landowner agreements to protect significant areas of natural and scientific interest.

(iii) The ministry will encourage outside agencies and other groups to protect areas of natural and scientific interest.

e. Plan Input and Review Guidelines
(i) The ministry will encourage the adoption of official plan policies which identify existing provincial parks and candidate parks, and place them in a land use category that recognizes park development and use.

(ii) The ministry will encourage land use designations in the official plan which permit only those uses on land adjacent to provincial parks which are compatible with park values.

(iii) The ministry will encourage the adoption of official plan policies and designations which provide appropriate protection to significant areas of natural and scientific interest.

G: general recreation

1. OBJECTIVES

General recreation includes those recreation activities, other than hunting and fishing, which take place outside of provincial parks. Tentative objectives for these other recreation activities in southern Ontario are:
- to provide and encourage a wide variety of outdoor recreation opportunities ranging from day use to backcountry experiences;
- to identify, select, and protect provincially significant natural and cultural resources; and
- to provide an economic contribution through tourism.

2. TARGETS

No targets have been assigned; it is assumed that the current level of supply on public lands will be maintained.

3. RESOURCE ANALYSIS

The ministry directly contributes to the achievement of the general recreation objectives by providing trails and other recreation facilities on agreement forests, wildlife management areas, park reserves, and other Crown lands in Lindsay District. This includes the management of two Crown land access points (at Deer Lake Fish Hatchery and Scugog Island Crown property—Map 7) which provide boat launching, picnicking, and fishing. County agreement forests such as Ganaraska, provide 65km of snowmobile trails and 20km of cross-country ski trails. All other Crown lands will remain open to the public for unorganized, low intensity recreational opportunities.

Two Crown properties, Scugog Island and Kendal, will be managed with an integrated resource management theme, and will include the provision of recreation.

It should be noted that while there are no specific targets for general recreation, the district will seek to maintain the present level of service.

Numerous groups and agencies such as conservation authorities, Canada-Ontario Rideau, Trent-Severn Corridor (CORTS), municipalities, and private organizations in the district also contribute to the general recreation objectives by providing trails, other recreation facilities, and protecting significant natural and cultural resources. For example, the Great Pine Ridge Equestrian Trail, Ganaraska Hiking Trail, and Sno 1 snowmobile trail, which traverse the Lindsay District, are managed by local trail groups.

The ministry will assist groups and agencies through the grants provided to conservation authorities, the funding of some municipal recreation development, the granting of permission to develop recreational trails on appropriate public lands, and the provision of information and advice on significant natural features. The ministry will also maintain contacts with local suppliers of recreation opportunities such as trail clubs, and will offer advice on the development and management of facilities by these private suppliers.

Whenever long distance trails intersect property managed by the ministry, consideration will be given to the provision of trail access and facilities such as parking, washrooms and potable water. Provision of such facilities will be decided upon and will be carried out in conjunction with trail groups.

The Lake Ontario shoreline, CORTS Corridor, and other inland lakes and rivers in Lindsay District are important recreation and tourism resources. Recreation and tourism provide an important, although in many cases seasonal, contribution to the local economy.

It is part of the ministry's objective to provide on Crown land and encourage on private land, a continuous contribution to the economy from tourism and its related industries.

4. PROGRAM STRATEGY

a. Contribution to General Policies

Environment

- take appropriate action for the protection of any identified provincially rare and endangered species of native plants and animals.

b. Important Resource Areas and Area Strategies

The selection of important areas has been strongly influenced by existing public lands available for recreational pursuits. These areas can be further categorized as follows:

(i) Public access points: Deer Lake Fish Hatchery and Scugog Island;
(ii) Agreement forests: Ganaraska, Northumberland and Victoria;
(iii) The Oak Ridges Moraine; and
(iv) Crown land.

(i) Public access points The ministry will maintain the Deer Lake Fish Hatchery and Scugog Island public access points at their present level of service providing the present level of funding is maintained.

(ii) Agreement forests The ministry will attempt to maintain the existing trail opportunities at Ganaraska, Victoria, and Northumberland County Agreement Forests. During periodic reviews of these forest agreements, the recreational potential of these areas will be studied. Those recreational opportunities which are appropriate and feasible will be incorporated into these agreements.

(iii) The Oak Ridges Moraine The Oak Ridges Moraine occupies a large part of the district. Several important properties, including the Ganaraska and Northumberland County Agreement Forests, and the Kendal property are open to the public in this area. Recreation activities are part of the multi-use program being carried out on each agreement forest and at Kendal. There are also conservation authority properties and privately managed recreational trails on the moraine.

The Region of Durham official plan designates most of their part of the Oak Ridges Moraine as Major Open Space. Although this designation allows a wide range of land uses, the Region perceives the moraine as an important natural area, and recreational activities are considered as one of the preferred uses. The Northumberland Task Force offered similar directions in Northumberland County. The ministry intends to continue its low intensity recreation programs in the moraine, but the primary recreational emphasis in the parks program will continue to be on Crown properties which have water frontage. These properties are outside the moraine.

(iv) Crown land The ministry will generally permit unorganized recreational use of Crown land with minimum restrictions considering other resource uses and the environment. Proposals from the private sector to provide a base for recreational activities will be carefully considered. Should provincially rare and endangered species of native plants or animals be identified, appropriate action for their protection will be taken. The ministry will attempt to maintain the current level of recreational opportunities on Crown land.

c. Resource Management Integration Guidelines

(i) Parks staff will provide technical advice and assistance to the other programs in the planning and operation of recreation facilities on lands managed primarily for purposes other than recreation.

(ii) The recreation potential of agreement forests and Crown properties will be given due consideration in any periodic agreement reviews and management proposals.

(iii) Any development of access points will be done by parks staff only after consultation with the other programs, in particular, fish and wildlife and lands.

d. External Co-ordination Guidelines

(i) The ministry will encourage outside agencies and interest groups to develop and maintain recreational trails.

The ministry welcomes requests for trail permission on Crown lands and other lands it manages. In reviewing these requests for permission for trail development the ministry will consider the following factors:

- the existing use of the property, including already established trails;
- the potential impacts on fisheries, wildlife, park, and forestry values; and
- planned uses of the property.

Trails will be permitted within areas of natural and scientific interest where they will not conflict with the protection of the feature. New trail proposals for candidate parks will not be considered until interim management plans have been prepared.

(ii) The ministry will continue to help municipalities provide recreation opportunities which complement existing public recreation.

H: land administration

1. OBJECTIVE

The objective for land administration in southern Ontario is:

- to facilitate the orderly development and conservation of Ontario's land and water resources for the continuous social and economic benefits of the people of Ontario.

2. TARGET

Specific land administration targets have not been developed.

3. PROGRAM ROLE

The ministry's overall approach to lands and waters management is further identified in the objectives and policies related to integrated resource management, public safety, and the environment.

The main responsibilities of the lands administration program in Lindsay District can be summarized as follows:

- identifying, controlling, and protecting public lands and waters;

- protecting the capability and environmental quality of the public domain; and
- data collection, analysis, and record keeping for land status planning purposes.

4. PROGRAM STRATEGY

a. Contribution to General Policies

The contribution to integrated resource management policy is covered in section c, Resource Management Integration Guidelines.

b. Program Direction

As Lindsay District has only small scattered parcels of Crown land, management priorities are directed toward certain standards and principles rather than selecting important geographic areas. The main factors in providing direction for the lands administration program are:

- the title to Crown lands in the district will be protected, particularly on shorelines and other areas of strategic significance to natural resources;
- the unmanaged Crown lands in Lindsay District will generally be open to the public for unorganized, low intensity activities such as hiking, hunting, and nature study. The ministry will restrict access when necessary because of degradation of the site, maintenance problems, legal disputes, forest fire conditions, or any other reason in the public interest. The ministry will not encourage camping on the unmanaged Crown lands in the district;
- the ministry will use the Crown lands in its control to achieve its resource production and outdoor recreation objectives; and
- the ministry will honour its existing land tenure agreements such as leases and licences of occupation, and will consider new commitments which are consistent with its goals and objectives.

Emphasis in the lands and waters program will be on:

(i) Property management plans, and
(ii) Crown land use by individuals

(i) Property management plans There are a number of parcels of Crown land in Lindsay District. The ministry intends to manage each property in accordance with a property management plan. On the smaller and more isolated properties this plan may be quite brief, but each property will, insofar as possible, assist in achieving the outdoor recreation or resource production objectives of the ministry. It is thought that in most locations, these objectives will be compatible, and a multi-use or integrated resource management approach will be adopted.

The Kendal and Scugog Island Crown properties will be managed under specific Crown land management plans with the emphasis on integrated resource management. Low intensity recreation, forestry, and wildlife management will be pursued. Previous Crown land management areas such as Quackenbush and Indian Point properties are now identified as candidate provincial parks. In the interim, previous Crown land management plans will apply until further direction from the parks program.

(ii) Crown land use by individuals The ministry has tenure agreements such as licences of occupation, leases, and land use permits, which allow individuals the use of certain Crown lands in the district. Recently, these forms of tenure have been issued for commercial docks, bridges, and annually for pasturing cattle, agricultural crops, and group campsites.

Each tenure request will be considered on its own merit, and in the light of other ministry programs. Under certain forms of tenure, the ministry may consult the municipality and consider the possible repercussions on neighbouring landowners.

Generally, the beds of most navigable waters are owned by the Crown, and are subject to the *Public Lands Act.* Like dry land, the use of Crown land under water also requires the approval of the ministry. In the Kawartha Lakes and federal harbours, the ministry cooperates with the federal authorities in administering these requirements.

c. Resource Management and Integration Guidelines

(i) Lands and waters management plans (e.g., interim property management and Crown land management plans) will be guided by the theme of integrated resource management. These plans and any major revisions will be circulated to all appropriate supervisors for review to ensure that all district program concerns are considered and supported wherever possible.

(ii) Any proposed disposition will be reviewed with the other programs.

(iii) Lands under interim property management will be managed by the lands program in a manner consistent with its character and its capacity to withstand use. Management activities will not foreclose options for eventual classification and development.

(iv) Approvals for which the lands program is responsible will be co-ordinated with the other programs.

d. External Co-ordination Guidelines

(i) Lands staff will be responsible for maintaining communications with external agencies regarding any Crown land administration matters.

(ii) Any lands declared surplus by the ministry are offered first to public agencies.

(iii) Any disposition of Crown land to an individual must receive municipal approval.

e. Plan Input and Review Guideline

(i) In addition to other specific program concerns, the ministry will discourage through plan input and review, development that:

- has a detrimental impact on resource management practices existing or proposed on Crown land;
- occurs on land designated and approved for acquisition by the Crown; and
- contravenes the intent of the *Lakes and Rivers Improvement Act*, the ministry's hazard land policy, or the provincial flood plain policy.

IV APPLICATION

The ministry will apply the *Land Use Guidelines* by encouraging proper management of natural resources, carrying out projects on Crown lands and waters, assisting with the management of resources on private lands and lands owned by other agencies, and by providing information to other agencies, landowners, and the public. It is important to note that this document has no legal status.

The ministry recognizes that private landowners, other government agencies, municipalities, conservation authorities, and interest groups are key partners in any effort to achieve effective and integrated resource management. The Ministry of Natural Resources will continue to work with these groups, especially with municipalities through the ministry's plan input and review program, to ensure that resource values are considered in local planning documents.

The ministry recognizes that the control of land on private land in municipalities is exercised by those municipalities under the authority of the *Planning Act* which is administered by the Ministry of Municipal Affairs and Housing.

This section outlines how the ministry may achieve its objectives through:

1: Ministry Programs;
2: Working with other Agencies; and
3: Working with Landowners.

A summary list of the means by which the *Land Use Guidelines* may be applied is outlined below. The discussion which follows elaborates on these points.

Strategies to be used in applying the *Land Use Guidelines* include:

- preparation and approval of resource management plans;
- planning and approval of specific ministry development projects;
- input to, and review of, municipal official plans, zoning by-laws and amendments, plans of subdivision and consent applications;
- review of specific development proposals;
- use of specific conditions in permits, licences, leases, and easements issued under the authority of provincial legislation (e.g., *Public Lands Act, Lakes and Rivers Improvement Act, Crown Timber Act*);
- liaison and cooperation with other government ministries and agencies such as conservation authorities; and
- education and extension programs with private landowners, municipalities and interest groups.

1. MINISTRY PROGRAMS

The policies of the ministry are intended to flow from the *Southern Ontario Co-ordinated Program Strategy,* which establishes the ministry's general land use requirements, through more detailed types of plans such as the *Lindsay District Land Use Guidelines.* This is illustrated by Table 13. This document establishes the land use framework of ministry activities in the Lindsay District. Reference to the program maps will assist the ministry in resolving resource management conflicts. More detailed technical planning occurs in the resource management plans in each ministry division.

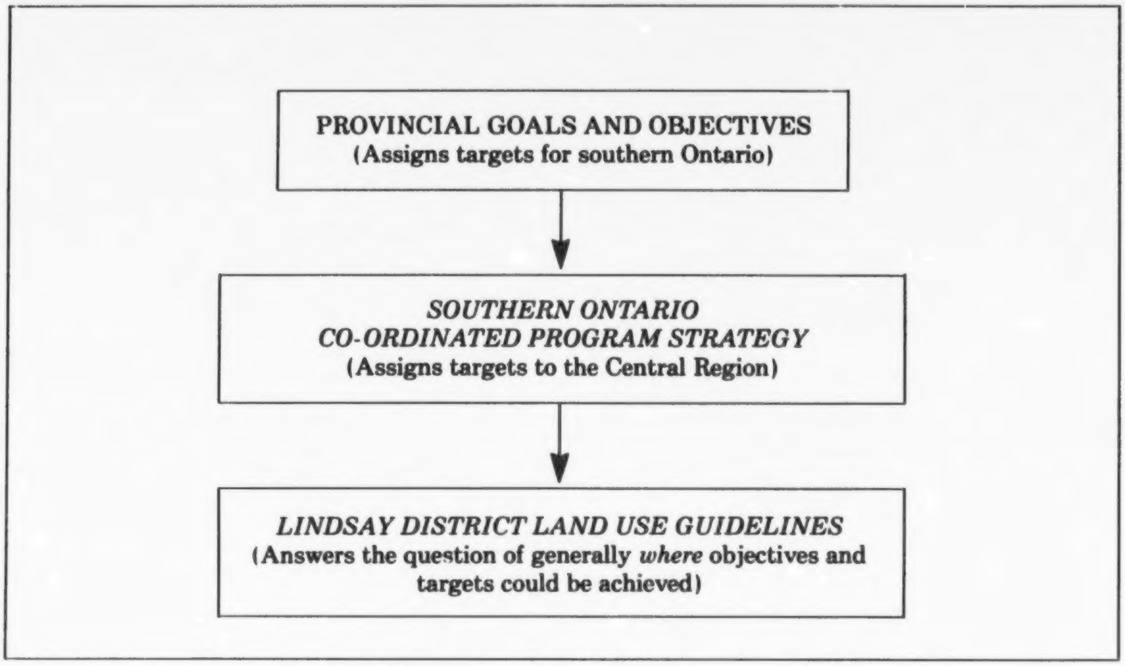
The ministry has adopted a management by objectives approach to its budgeting and work planning. Within the framework of the *Land Use Guidelines,* the District Manager and program supervisors will set objectives and be audited on the achievement of their programs. The policies and maps in this document will be a guide when projects are proposed, approved or funded.

a. Planning Integration

The ministry will promote planning integration by employing the integrated resource management concept wherever possible. Mechanisms that the district will put in place to encourage planning integration include:

- Crown land management plans will reflect the integrated resource management theme;
- resource management plans will require circulation through and approval by the District Management Committee;

TABLE 13 PLANNING HIERARCHY OF THE MINISTRY OF NATURAL RESOURCES


PROVINCIAL GOALS AND OBJECTIVES
(Assigns targets for southern Ontario)

SOUTHERN ONTARIO CO-ORDINATED PROGRAM STRATEGY
(Assigns targets to the Central Region)

LINDSAY DISTRICT LAND USE GUIDELINES
(Answers the question of generally *where* objectives and targets could be achieved)

- resource management plans will address the intent of the *Land Use Guidelines*; and
- strategies to promote integrated resource management, as outlined in each program section of the *Land Use Guidelines* (Resource Management Integration Guidelines), will provide a basis for each program's contribution to planning integration.

Examples of current initiatives to promote planning integration are the Crown land management plans for the Scugog Island and Kendal properties. The Scugog Island plan emphasizes multiple use such as a water access point, a controlled pheasant hunt, a proposed white pine seed orchard, agriculture (for grain crops, hay), and a Ducks Unlimited flooding proposal. The Kendal plan also reflects the integrated management theme through trout management, forest management (planting), land use permits for agriculture, maple syrup operations, dog trials, and private pheasant releases.

In addition to these mechanisms to promote integrated planning, a General Resource Areas map, Map 8, has been prepared to broadly reflect areas of current program resource management and future capabilities. The discussion for each of the areas outlines a general description of the resource base and the relative significance of each area to ministry programs. Integrated resource management will be emphasized in all of the areas, and will provide the direction for resource management actions. The area descriptions and discussions are printed on the face of the map.

b. Projects
Ministry staff carry out resource management projects such as tree planting and habitat improvement on Crown land, and other land with the agreement of the owner. Work will be tailored toward meeting district production targets, or providing demonstrations of resource management techniques, and the long term resource capabilities of the property will be considered. The important resource areas and policies in this document will be consulted when projects are established.

c. Enforcement
The ministry will enforce legislation it administers equitably in all parts of the district, and will cooperate with the Ontario Provincial Police and other enforcement agencies. Special attention will be given to habitat protection and title to Crown lands. Enforcement will generally be carried out and coordinated by the Division of Fish and Wildlife, though all divisions of the ministry are responsible for law enforcement to some degree.

d. Property Management Plans
The ministry intends to manage each Crown

property toward achieving one or more of its objectives. In some cases, such as parks, detailed master plans will be prepared. Some Crown properties are not very productive, and require relatively little management, but they will still be managed toward meeting the ministry's objectives.

2. WORKING WITH OTHER AGENCIES

Natural resources and land are used by many people and agencies other than the Ministry of Natural Resources. The ministry intends to cooperate with other agencies, municipalities, and individuals in meeting their objectives, and to solicit their assistance in meeting ministry objectives and targets.

The important resource areas and policies identified in this document will be the basis of the ministry's comments on all land use planning matters. The following means are proposed to assist the ministry in working with other agencies.

a. Municipal Governments

The *Lindsay District Land Use Guidelines* will serve as one of the sources of information for ministry involvement in municipal planning.

The ministry will consult with municipal officials and private landowners where the *Land Use Guidelines* indicates the ministry wishes to influence particular land uses on private land in organized municipalities. At this time the needs of other land users will be taken into consideration.

There may be occasions when the ministry feels that certain land uses or proposed developments on private land, while in conformity with municipal planning documents, will have a negative impact on ministry programs or interests. In such situations the ministry will attempt to resolve the situation through discussions with the proponent, the municipality, and the Ministry of Municipal Affairs and Housing.

In municipalities containing Crown land there may be situations where municipal planning documents do not permit land uses on Crown land, but the ministry considers these land uses to be acceptable. Where this happens, and it appears that a possible land use conflict might arise, the ministry will consider taking further action under the procedures provided for by the *Planning Act*.

b. Conservation Authorities

Conservation authorities are independent corporate agencies set up jointly, under the *Conservation Authorities Act*, by the local municipalities and the Province of Ontario to develop and implement water related land management programs.

The *Conservation Authorities Act* is administered on behalf of the Province of Ontario by the Ministry of Natural Resources.

Conservation authorities are presently completing watershed plans that will outline the long term direction of all authority programs. The primary program of conservation authorities in flood and erosion control complements the ministry's programs. Other conservation authority programs, particularly those in forestry, fish, wildlife, and recreation supplement the efforts of the ministry. Both agencies are making every effort to reduce duplication and overlap in their planning, and ensure that the delivery of resource management programs achieves the greatest possible benefits to the people of Ontario.

The ministry has a close working relationship with the conservation authorities in Lindsay District (Kawartha Region, South Lake Simcoe, Central Lake Ontario, Ganaraska Region, Otonabee Region, Lower Trent Region, and Crowe Valley). Ministry staff sit on conservation authority advisory boards and provide advice on watershed and property development plans, sensitive areas studies, fish and wildlife management, managing agreement forests, and similar projects.

While most contacts with conservation authorities occur at the staff level, senior personnel in the district also have contact with board members of authorities who, at a local level, are often better able to influence some types of land use and natural resource decisions in the municipalities and private sector.

Conservation authorities in Lindsay District have been in contact with ministry staff during the preparation of this document, and the district intends to offer assistance to the authorities in preparing and implementing their watershed plans. Since the conservation authority programs help to achieve a wide variety of natural resource objectives, the authorities may be in a position to assist in meeting the ministry's objectives and targets. Following the completion of the conservation authority watershed plans, and negotiations with the authorities, amending notes will be added to the *Lindsay District Land Use Guidelines* reflecting potential contributions by the authorities to ministry target achievement.

c. Trent-Severn Waterway
Parks Canada is the branch of the federal government responsible for managing the Trent Waterway, which includes most of the inland lakes in Lindsay District. Jurisdiction over the Trent Canal has been complicated by constitutional questions for many years. As a convenience, a working relationship has developed in which the Trent-Severn Waterway has assumed the role of lead agency, and consults with the Ministry of Natural Resources about its concerns before approving dredging or filling applications. A federal-provincial committee is investigating whether jurisdiction over the waterway should be transferred to the province or whether any improvements to the present arrangement should be made.

Ministry of Natural Resources and Trent Canal staff communicate regularly, usually about dredging and filling, but lands matters, fisheries management, and development proposals are also sometimes discussed. From a resource production point of view, the Trent-Severn Waterway can assist greatly in fish and wildlife management and public recreation.

d. Ontario Ministry of Agriculture and Food
The Ministry of Natural Resources recognizes the importance of agriculture. On private land the ministry will normally not encourage or support activities or land uses which result in long term loss of the amount of land in agricultural production. The ministry will encourage forestry, recreation, and other compatible uses on low capability land presently not in agricultural production.

Generally, on public land the ministry will maintain high capability agricultural land, or other sites as identified by the Ministry of Agriculture and Food, in uses which do not preclude the long term use of these lands for agriculture—should agricultural use become necessary or desirable.

e. Ontario Ministry of the Environment
The Ministry of Natural Resources will work closely with the Ministry of the Environment in meeting the requirements of the *Environmental Assessment Act*, and will work closely with that ministry in monitoring impact on the environment related to natural resources.

The two ministries have jointly developed guidelines in this regard related to water quality and fisheries issues.

The Ministry of Natural Resources has responsibility for identifying the fisheries values of a waterbody with respect to meeting the Ontario Government's fisheries mandate. This identification is based on the district *Land Use Guidelines* and, as developed, local fisheries management plans. The Ministry of the Environment is responsible for determining existing water quality and predicting the effects of proposed development on water quality. The latter information is used by the two ministries to assess potential effects on fisheries values.

f. Ontario Ministry of Citizenship and Culture
The Ministry of Natural Resources works in cooperation with the Ministry of Citizenship and Culture in the identification and protection of archaeological and historical resources on public land. The coordination occurs through regular liaison with heritage planners and field archaeologists, and through requests for assistance when heritage conservation issues arise.

The ministry is working closely with The Ontario Heritage Foundation, an agency of the Ministry of Citizenship and Culture, on projects related to protection of areas of natural and scientific interest.

g. Other Provincial Ministries
The Ministry of Natural Resources has frequent contacts with the Ministries of Municipal Affairs and Housing, Transportation and Communications, and other provincial ministries. A continuing dialogue among staff, and frequent written communication, is probably the best way to ensure that staff in each ministry are aware of the other's concerns.

h. Special Interest Groups
There is a role for interest groups to assist the ministry in the application of the district *Land Use Guidelines*. Examples include providing opportunities for public education and training in resource management, assisting in the acquisition of land, and promoting wildlife and water management. Also, interest groups can assist in the task of keeping this document up to date by informing the ministry of new resource information, and changes in demand or pressures placed upon a resource.

i. Canada-Ontario Rideau, Trent-Severn Corridor
The governments of Canada and Ontario have approved a set of policies relating to the planning, development and management of one of Canada's prime recreational resources—the Rideau, Trent-Severn Corridor. The implementation and the attainment of the Canada-Ontario Rideau, Trent-Severn (CORTS) objectives is only possible through the cooperation of all interests in the corridor. The Ministry of Natural Resources is an

active member of the CORTS Agreement Board and will be the lead ministry in implementing many of the approved policies. For other policies, it will provide support to agencies having lead responsibility.

A significant portion of the CORTS corridor is located in Lindsay District, including the areas of Rice Lake, the Otonabee River, the Kawartha Lakes, Lake Scugog, and the Scugog River. Within this area, the district *Land Use Guidelines* proposes land use activities which complement the CORTS policies. The district's review of other plans and development proposals within the corridor will consider the degree to which they support the approved CORTS policies.

The Lindsay District recognizes the CORTS corridor as a significant local resource area. The approximate boundaries of the corridor are outlined on Map 8, the General Resource Areas map. Within the corridor, the ministry will implement the CORTS policies as appropriate, and promote integrated resource management for ministry programs.

j. The Kawartha Development Strategy

The Kawartha Lakes system is one of Ontario's most valuable recreation resources. It is also one of the most intensively used, in terms of cottage development, boating, fishing, and tourism. In June 1976, a joint provincial-municipal technical committee was established to examine the implications of continued development on the Kawarthas. The committee was composed of representatives of the Provincial Secretariat for Resources Development, the Ministries of Environment, Natural Resources, and Municipal Affairs and Housing, the CORTS secretariat, and the two local Planning Boards—Victoria County and North Kawartha.

The *Kawartha Development Strategy* (KDS) was submitted to Cabinet in 1978, and was subsequently approved. The *Strategy* outlines recommendations for controlling future development on the Kawarthas to ensure that the environmental integrity of this important resource area is protected. The implementing ministries, Natural Resources, Municipal Affairs and Housing, and Environment, will ensure the practical implementation of the KDS through the review and approval of local planning documents such as official plans and zoning by-laws, and development proposals. The responsibility for co-ordination of implementation is assigned to the Ministry of Municipal Affairs and Housing.

k. Inputs to Municipal Planning and Plans of Other Agencies

The ministry will attempt to maintain a cooperative working relationship with municipalities, conservation authorities, other ministries, and land-related agencies. The ministry will provide information on natural resources and ministry programs for use in their planning. The ministry will also undertake to provide specific recommendations and guidance for use in the plans of other agencies for mutual benefit. In particular, planning inputs will be made regarding municipal official plans, zoning by-laws, amendments, highway, hydro, and pipeline route planning, and similar large scale land-related projects.

l. Approvals

The ministry will assist in the review of planning documents such as official plans, zoning by-laws and their amendments, subdivisions, and severances. This program will be carried out primarily by the lands program, but other programs will assist. Planning inputs will be made in all parts of the district, with special attention to the policies and priorities outlined in this document.

m. Incentives and Assistance to Other Agencies

Certain forms of assistance are available to municipalities, conservation authorities, and other agencies. In the past, the ministry has offered assistance in forest management through agreement forests, supplying tree seedlings and technical advice, in parks under the *Parks Assistance Act*, and in fish and wildlife management by fish stocking, rearing and releasing gamebirds, and assisting in predator control.

3. WORKING WITH LANDOWNERS

Most of the land in Lindsay District is privately owned and will continue to be used by individual landowners for their own purposes. Private land management need not be destructive to natural resources, and the ministry expects to be able to meet many of its resource product objectives from private land. To do this, special emphasis will be given to extension services and public education programs. The key ways of working with private landowners are:

a. Information Programs

The ministry will encourage natural resource management through a wide variety of means. Information programs will not be limited to schools or to children, but will be directed toward special interest groups, and the public. The ministry will attempt to widen the experience and capabilities of its own staff to cope with a range of natural resource questions rather than a narrow speciality. The ministry will work with staff of related agencies, such as conservation authorities, and other ministries to improve their understanding of ministry programs. Exhibits, brochures, newspapers, radio, signs, and participation in community events will be used in all parts of the district. Special attention will be given to soliciting responses from the public about the effectiveness of ministry programs, acknowledging suggestions, and ensuring that they receive appropriate attention. The district's media programs will be coordinated by the parks program, but specific projects may be assigned to other divisions, and all divisions will assist.

b. Incentives, Approvals, and Assistance Programs

The ministry can provide incentives such as tree planting, low cost tree seedlings, assistance in fish and wildlife management, and technical advice to individuals and landowners. Where assistance from other sources is available, the ministry will help the owner reach the relevant agency. In its contacts with the public, the ministry will offer advice without charge on natural resource matters. Using the relevant legislation, the ministry will incorporate appropriate conditions and designs into its approval of development projects in order to provide natural resource benefits consistent with the overall intent of the project. These incentives, approvals and assistance programs will be carried out by each ministry division, referring to the locational policies in this document.

c. Plan Review and Approvals

The ministry is responsible for approving certain types of projects under its legislation—dams, pits and quarries, and many types of filling and dredging work. The ministry also provides assistance to other agencies, such as municipalities, the Ministry of Municipal Affairs and Housing, and regional governments in the approval of other projects under their legislation. The ministry will continue to provide these services. The types of projects reviewed will include: official plans and amendments, zoning by-laws, subdivisions, severances, dredging or filling works, breakwaters, hydro routes, generating stations, pipelines, highways, disposal sites, conservation areas, pits, quarries, and other types of work. In all plan reviews, the ministry will attempt to protect the natural resource as much as possible over the long term, and encourage an acceptable level of safety for users of the development and the public.

APPENDIX

A: highlights of public consultation

The public consultation program for the preparation of the *Lindsay District Land Use Guidelines* started in 1981, when initial meetings were held with the Canada-Ontario Rideau, Trent-Severn Secretariat and local conservation authorities. The program carried through until September, 1982. During that time the thrust of public consultation centred on meetings with government agencies, conservation authorities, upper tier municipalities, and a series of public open houses held in June and August, 1982. The June open houses, held in Lindsay, Peterborough, Toronto, Whitby, and Cobourg, were arranged to outline the background information which had been collected. The public was asked to comment on the information. These displays also presented an opportunity to outline the ministry's role and responsibilities in resource management.

The open houses held in August 1982, at the same locations as the June displays, outlined highlights of the draft *Lindsay District Land Use Strategy*. Program objectives, targets, important resource area mapping, and preliminary implementation strategies were shown. Those attending were invited to comment on the direction proposed in the draft *Land Use Strategy*.

During July and August, 1982, over 500 copies of the draft *Lindsay District Land Use Strategy* were circulated to the public, including municipalities, local interest groups, other ministries and government agencies, and individuals who requested copies. All were asked to review the draft and provide the district with their comments.

A numerical summary of contacts during the public consultation program, and the number and source of responses are shown in Tables 14 and 15.

Approximately 67% of all responses originated from individuals, mainly those who attended the background information or draft *Land Use Strategy* open houses, and submitted comments concerning the draft *Land Use Strategy*. Municipalities (upper and lower tier), and interest groups represented about 12% and 10% of the total number of responses respectively.

Based on the analysis and evaluation of all the public input received, this document was prepared. The Minister of Natural Resources reviewed a summary and analysis of public comment, and discussed the draft document with the District Manager.

Copies of all public responses are available for review at the district office, the ministry's main office public reading room and the Legislative Library at Queen's Park.

TABLE 14 SUMMARY OF CONTACTS

No. of Background Information Open Houses	5
Background Open House attendance	380
No. of Draft Strategy Open Houses	5
Draft Strategy Open House attendance	212
Comment Sheets distributed	370 (approx.)
Draft Strategies distributed	530
Phone Calls received	20 (approx.)
Meetings with Municipalities	7
Meetings with Conservation Authorities	4
Meetings with Other Agencies	1
Interviews with Media	12

TABLE 15 SUMMARY OF RESPONSES

Response Documentation / Category of Respondent	Individual	Conservation Authority	Government Agency	M.P.P.	Municipality	Interest Group[1]	Industry[1] (Co. or Assoc.)	Category Unknown (Anonymous)	All Categories (Total)
Background Open House Comment Sheet	75	—	3	—	3	5	—	3	89
Background Open House Record of Conversation	2	—	—	—	—	—	—	—	2
Draft Strategy Open House Comment Sheet	10	—	—	—	—	1	—	—	11
Draft Strategy Open House Record of Conversation[2]	2	—	—	—	—	1	—	—	3
Mailed Comment Sheet	17	2	—	—	—	—	1	—	20
Letter/Brief	22	5	3	1	15	12	4	—	62
Record of Conversation	—	—	—	—	4	—	—	—	4
Total	128	7	6	1	22	19	5	3	191

(1) Responses which are included in the Interest Group and Industry columns are those which were received from official representatives.
(2) People attending open houses were asked to record verbal comments on comment forms.

GLOSSARY

Areas of Natural and Scientific Interest
Areas of land and water containing natural landscapes or features that have values related to protection, natural heritage appreciation, scientific study or education.

Candidate Park
An area designated in Ministry of Natural Resources land use guidelines which may be given official status as a park at some time in the future.

Capability
The natural ability of an area to provide continuous opportunity for benefits under an assumed level of management.

Capacity
The upper limit to which an area of land, or water, may be used or developed without an undesirable change taking place in the environment. Also called carrying capacity.

Coldwater Habitat
Waterbodies having characteristics that support coldwater fish species, such as trout and whitefish.

Crown Land
All land (including land under water) held by the province, both land which has never been sold and land which has been reacquired.

Deer Concentration Area
An area having available shelter and food, in which deer are usually found during the winter.

Earth Science Site
Public or private land where landforms of provincial interest have been identified.

Forestry Purposes
Includes the production of wood and wood products, provision of proper environmental conditions for wildlife, protection against floods and erosion, recreation, and protection and production of water supplies.

Furbearers
Animals having commercially valuable pelts including beaver, mink, marten, otter, muskrat, fisher, fox, raccoon, wolf, lynx.

Goal
A general purpose to which the ministry aspires.

Habitat
The place or type of site where an animal or plant naturally or normally lives.

Hazard Land
Land, which because of its physical characteristics in combination with its location present a risk for its occupants including loss of life, property damage and social disruption (e.g., flooding).

Historical Park
A park area selected to represent the distinctive historical resources of the province in an open space setting, and protected for interpretive, educational and research purposes.

Integrated Resource Management
The co-ordination of resource management programs to ensure that conflicts are minimized and that management which would benefit several programs is encouraged. Integrated management encourages multiple use, but recognizes that in some circumstances management of areas for a single purpose may be necessary.

Interim Property Management
To provide management of land acquired by the ministry until such time as management is assumed by the intended user group.

Interim Use
Land and resource use and management practices which are permitted to occur over a period of time prior to the initiation of another identified use.

Land Use Guidelines
A document which displays direction concerning the use of land and water in a defined area. It

identifies where and how the ministry intends to achieve its objectives in a specific district through the use of Crown land and through influencing the use of private land.

Land Use Planning
A process which culminates in a direction regarding the use of land.

Life Science Site
Public or private land where a natural habitat of provincial interest has been identified.

Management
The judicious use of means to achieve ends. Management may have various levels of intensity.

Mining Rights
The right to work the ores, and minerals on or under any land. These may be granted separately from surface rights.

Multiple Use
A resource management or planning concept applied to very large areas to indicate that all basic uses are accommodated. Typically, two or more uses may occur on the same general area at the same time or in sequence.

Natural Environment Park
An area incorporating outstanding recreational landscapes with representative natural features and historical resources to provide high quality recreational and educational experiences.

Nature Reserve
An area selected to represent the distinctive natural habitats and landforms of the province, and are protected for educational and research purposes to benefit present and future generations.

Objective
A quantifiable end result to be achieved.

Occasion
A measure of actual recreational use describing the number of times a recreation resource or facility is used by individuals in a given time period. An occasion is considered not to exceed one day in duration.

Operational Plan
A part of a resource management plan stating the extent (includes human and financial resources) of all work of any nature to be carried out during one or more years of the management period.

Opportunity
A measure of recreation supply. It is used to describe the number of times a resource or facility can be used (occasions of use) in a given time period. An opportunity is considered not to be greater than one day.

Policy
A decision concerning the objectives to be achieved and the means of achieving them.

Productive Forest Land
Those lower capability agricultural lands, both forested and open, and higher capability lands with existing forest cover, from which the ministry hopes to achieve their forestry targets.

Production Forest Land
An area dedicated to the growing of merchantable timber or the production of other forest products.

Program
An activity undertaken by the ministry to provide a service or manage a particular resource.

Protection Forest
An area wholly or partially covered with woody growth, managed primarily to regulate streamflow, prevent erosion, hold shifting sand, or exert any other beneficial influence.

Public Land
Any land owned or administered by a public body or agency. It includes federal, provincial and municipally owned lands and lands held by agencies such as parks commissions and conservation authorities.

Resource
Any commodity that meets a need.

Resource Management
The control and co-ordination of the use of resources to achieve specific ends. Commonly applied in particular to natural resources.

Resource Management Plan
A plan by which the policies, objectives and targets usually of an individual program (except in the case of an integrated resource management plan) are implemented for a specific resource.

Sequential Use
Where one use is followed by another in planned sequence.

Site Class
A measure of relative productive capacity of a site for timber production.

Site District
A fairly large subdivision of a site region based

on a characteristic pattern of climate and landform features.

Site Region
An area of land within which the response of vegetation to the features of landform follows a consistent pattern. Each specific type of land (defined in terms of relief, soil, texture, depth and drainage) within a specific site region has its characteristic plant succession.

Sport Fish
For the purpose of this document sport fish are the top predator species sought by anglers.

Strategy
Planned actions or measures to achieve a desired end.

Target
A quantified end to be achieved or completed by a specific date.

Wetlands
Lands which are permanently or seasonally covered with shallow water and where distinctive soil conditions, plant, and wildlife communities develop. These include wetland forests (swamps), wetland thickets, marshes, bogs, and fens.

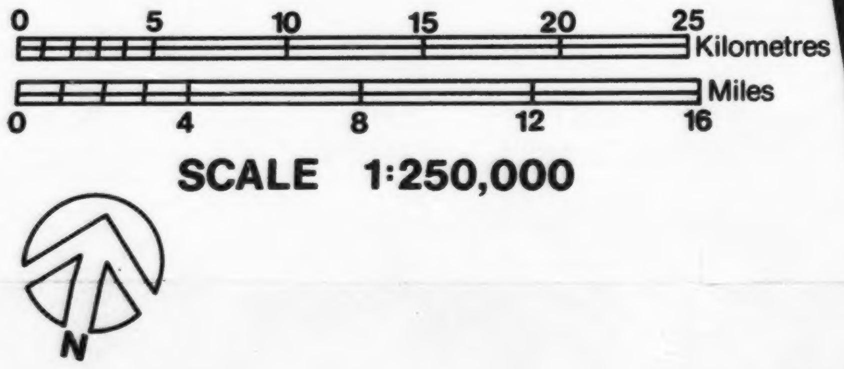
Map 7

LINDSAY DISTRICT

GENERAL RESOURCE AREAS

LEGEND

☰	Township Boundary
⋯	County or Regional Boundary
▬	MNR District Boundary
☰	Area Boundary
R1	Area Code
U	Urban and Urbanizing Area
IR	Indian Reserve

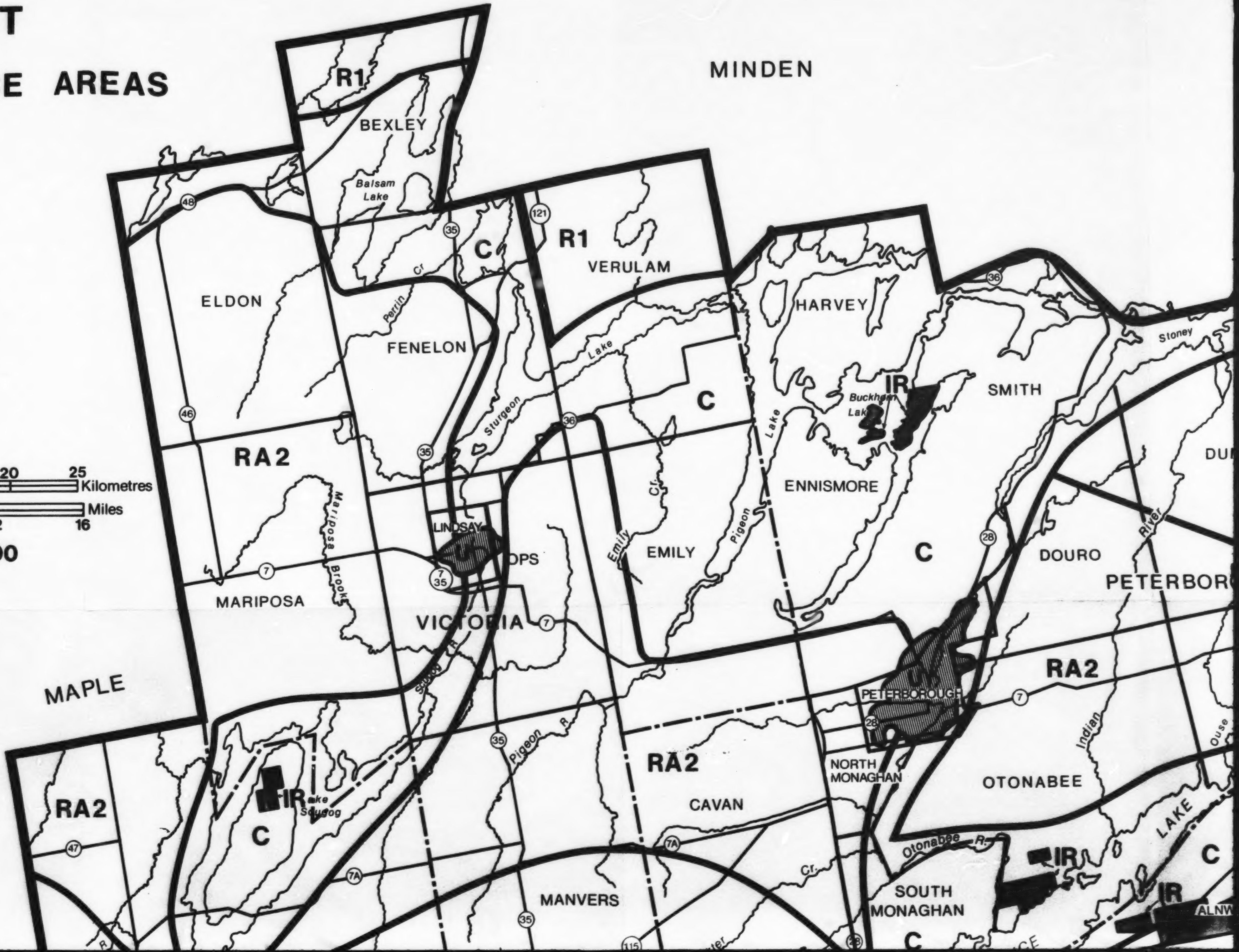


0
5
10
15
20
25
Kilometres
Miles
0
4
8
12
16
N

SCALE 1:250,000

Ministry of Natural Resources
Ontario

Hon. Alan W. Pope
Minister
W. T. Foster
Deputy Minister

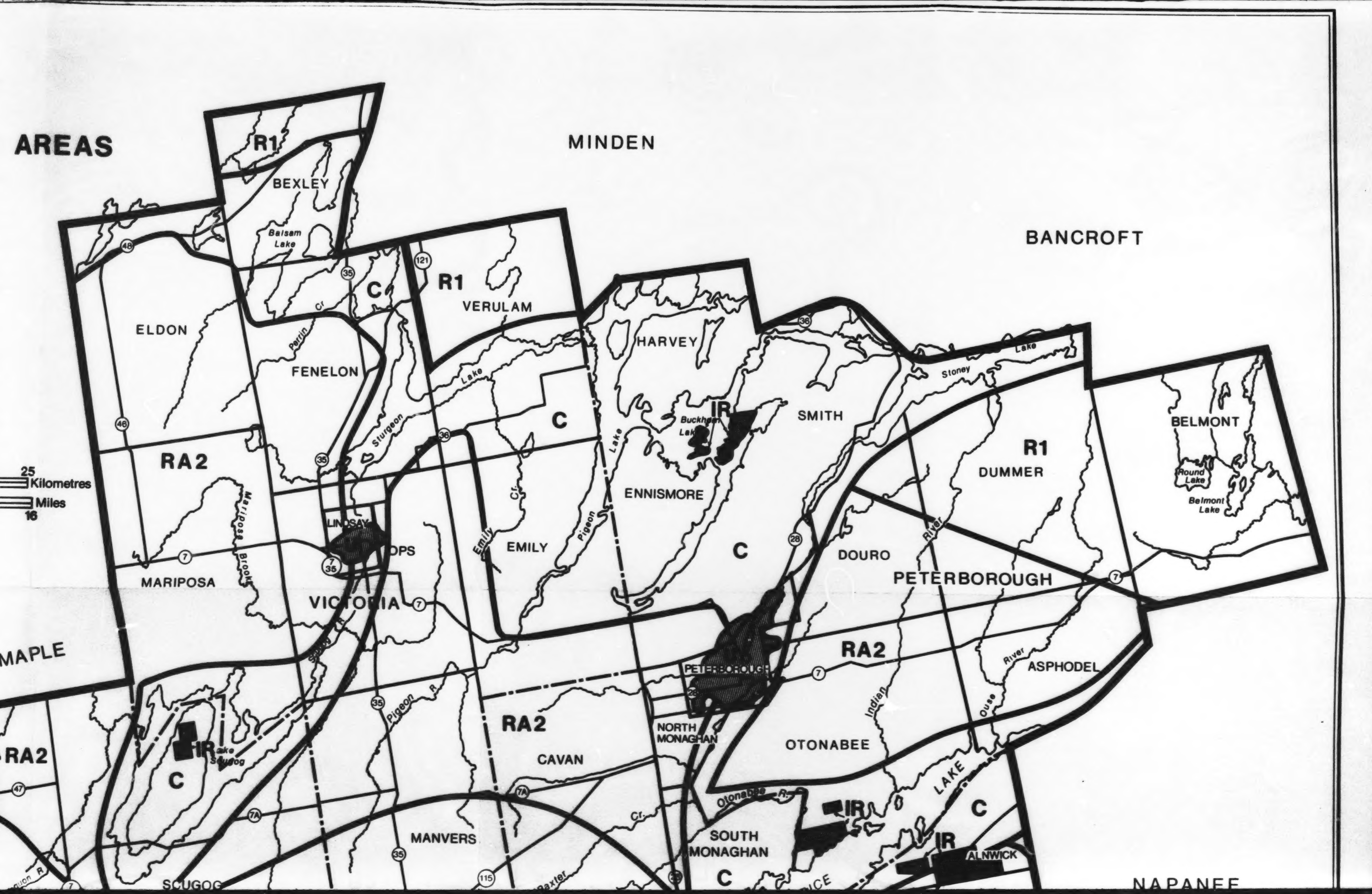


MINDEN
R1
BEXLEY
Balsam Lake
48
35
C
121
R1
VERULAM
36
HARVEY
Stoney
ELDON
Perrin Cr.
FENELON
Lake
C
Buckhorn Lake
IR
SMITH
46
Sturgeon
36
Lake
RA2
35
ENNISMORE
DU
Mariposa Brook
Cr.
LINDSAY
Emily
Pigeon
EMILY
C
28
DOURO
River
OPS
PETERBORO
7
35
7
MARIPOSA
VICTORIA
7
MAPLE
Scugog R.
RA2
PETERBOROUGH
7
28
35
Pigeon R.
RA2
Indian
Ouse
NORTH MONAGHAN
OTONABEE
IR
Lake Scugog
CAVAN
RA2
LAKE
47
C
7A
Otonabee R.
IR
C
7A
Cr.
SOUTH MONAGHAN
IR
MANVERS
35
115
C
ALNW

C CANADA-ONTARIO RIDEAU, TRENT-SEVERN (CORTS) CORRIDOR

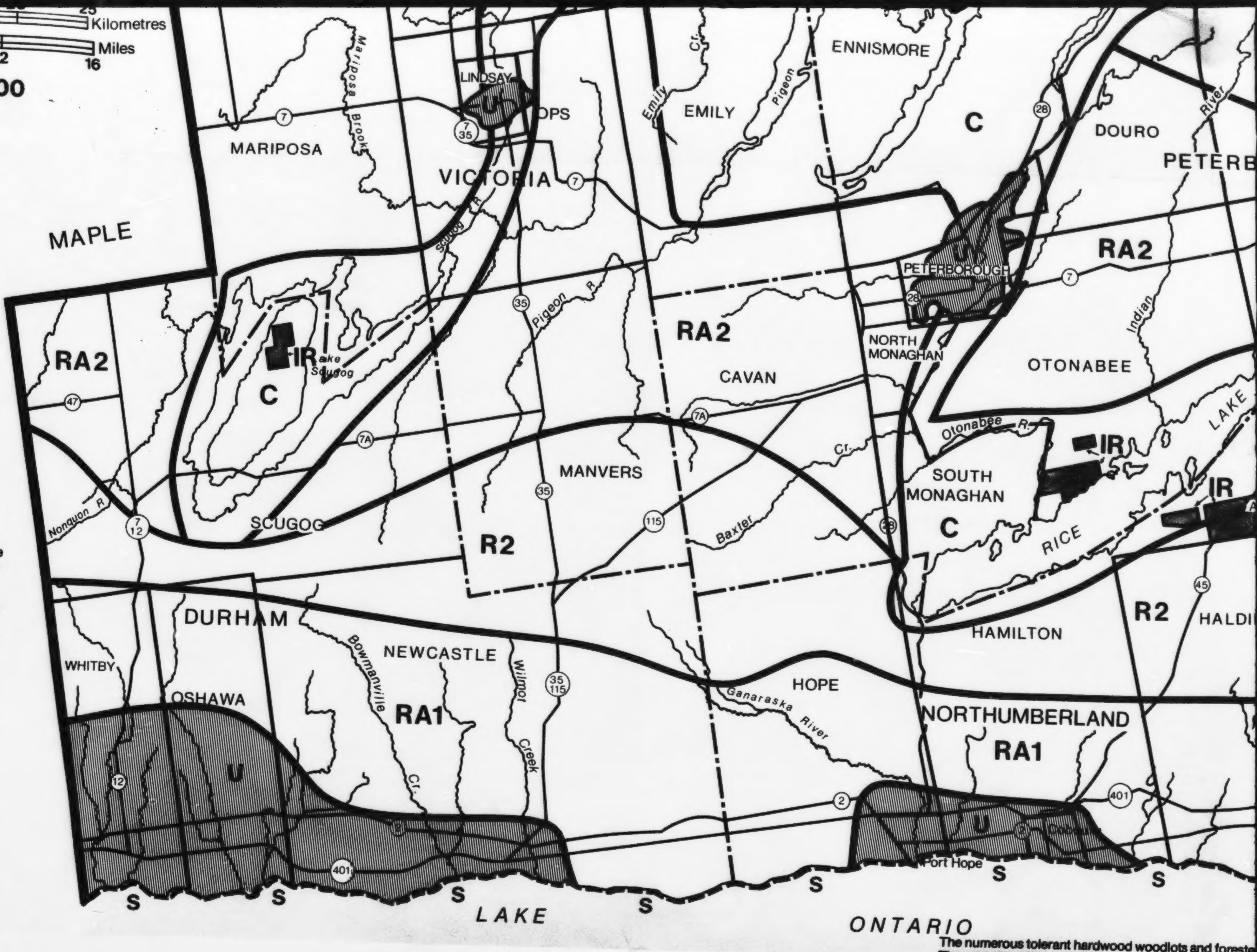
Area Description

This area is based on the boundaries of the Canada-Ontario Rideau, Trent-Severn (CORTS) Corridor. The area includes the


AREAS
MINDEN
BANCROFT
R1
BEXLEY
Balsam Lake
48
35
C
121
R1
VERULAM
ELDON
Perrin Cr.
FENELON
HARVEY
36
Stoney Lake
Sturgeon Lake
C
IR
Buckhorn Lake
SMITH
BELMONT
46
RA2
35
36
R1
DUMMER
Round Lake
Belmont Lake
25 Kilometres
Miles 16
Mariposa Brook
Cr.
Pigeon Lake
ENNISMORE
LINDSAY
OPS
Emily Cr.
EMILY
C
28
DOURO
River
7
35
MARIPOSA
PETERBOROUGH
7
VICTORIA
7
MAPLE
Scugog R.
RA2
PETERBOROUGH
28
7
River
ASPHODEL
35
Pigeon R.
RA2
Indian
Ouse
IR
Lake Scugog
RA2
NORTH MONAGHAN
OTONABEE
CAVAN
C
47
7A
LAKE
C
7A
Cr.
Otonabee R.
IR
SOUTH MONAGHAN
MANVERS
IR
ALNWICK
35
7
115
Baxter
28
C
ICE
SCUGOG
NAPANEE

Rideau, Trent-Severn (CORTS) Corridor. The area includes the

Kilometres
0
4
8
12
16
Miles
SCALE 1:250,000
N


MAPLE
MARIPOSA
Mariposa Brook
LINDSAY
U
OPS
VICTORIA
Scugog R.
EMILY
Emily Cr.
Pigeon
ENNISMORE
C
DOURO
River
PETERB
PETERBOROUGH
U
RA2
NORTH MONAGHAN
OTONABEE
Indian
RA2
Lake Scugog
IR
C
CAVAN
Pigeon R.
RA2
Otonabee R.
IR
SOUTH MONAGHAN
C
IR
RICE
LAKE
Nonquon R.
SCUGOG
MANVERS
R2
Baxter
Cr.
R2
HALDI
HAMILTON
DURHAM
WHITBY
OSHAWA
NEWCASTLE
Bowmanville
Wilmot Creek
Cr.
RA1
U
HOPE
Ganaraska River
NORTHUMBERLAND
RA1
U
Port Hope
Cobourg
S
S
S
S
S
S
S
LAKE
ONTARIO
7
35
7
28
7
7A
35
47
7A
7
12
35
115
28
45
35
115
12
401
2
401
2

Ontario

Ministry of Natural Resources

Hon. Alan W. Pope
Minister

W. T. Foster
Deputy Minister

C CANADA-ONTARIO RIDEAU, TRENT-SEVERN (CORTS) CORRIDOR

Area Description

This area is based on the boundaries of the Canada-Ontario Rideau, Trent-Severn (CORTS) Corridor. The area includes the Kawartha Lakes and connecting waterways such as the Scugog River, Otonabee River, and Trent Canal.

Because of the extensive water base, the corridor provides a wide variety of recreation and resource production opportunities. Three of the district's six provincial parks are located in the area (Balsam Lake, Emily, and Serpent Mounds Parks), in addition to other Crown properties. The Kawartha Lakes provide the most important fisheries resource base in the district, for both sport and commercial fishing. The many marshes in the area are important to maintaining an excellent inland warm water fishery, and habitat for waterfowl and furbearing animals. Localized areas of high potential mineral aggregates and forest resources are also found in the CORTS corridor.

Resource Management Policies

In 1982 a policy statement was jointly approved by the provincial and federal governments concerning the CORTS corridor. This ministry has the lead role in implementing 15 of the 48 CORTS policies, and a support role for the implementation of 10 of the policies.

The Lindsay District will contribute towards the objectives of the CORTS corridor by implementing the CORTS policies where appropriate.

Specific Ministry interests which will be pursued in the context of the CORTS policies include:

- protection of important fish and wildlife habitat;
- management of the Kawartha Lakes sport and commercial fishery;
- management of the three provincial parks and three candidate park areas in the corridor;
- management of other Crown properties within the corridor for public, low intensity recreation opportunities; and
- implementation of the Kawartha Development Strategy, where appropriate.

Generally, specific areas of importance to ministry programs will be managed to contribute to the ministry's objectives, promoting integrated resource management where possible.

IR INDIAN RESERVE

This area includes the Scugog Island (Scugog Township), Alderville (Alnwick Township), Curve Lake (Smith Township) and Hiawatha (Otonabee Township) Indian Reserves. Indian reserve lands were not considered in the resource analysis for the *District Land Use Guidelines*.

R2 RURAL-OAK RIDGES MORAINE

Area Description

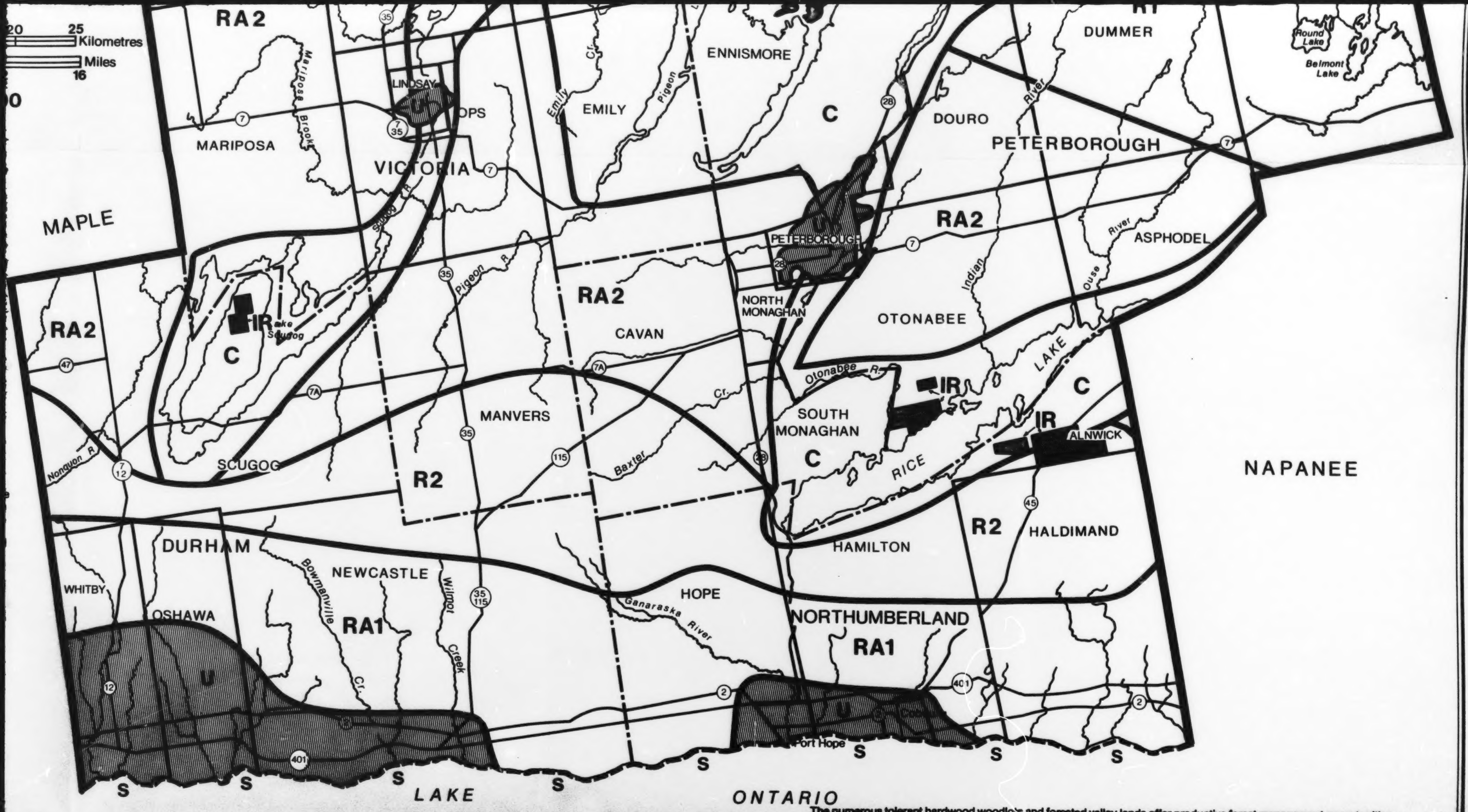
The Oak Ridges Moraine is recognized as one of the most distinctive physiographic features in southern Ontario. It extends from the Niagara Escarpment east to the Trent River.

The moraine is important because of the extensive areas of high potential mineral aggregate deposits, numerous licenced sand and gravel pits, the deep, productive soils suitable for tree planting, the large agreement forest properties, the diverse wildlife habitats, cold water stream headwaters, and the many opportunities for recreation.

The numerous tolerant hardwood woodlots and foreste
The area also offers excellent deer and upland wildlife h
area. There are also several important wetlands, particu
Pigeon River, Fleetwood Creek, Jackson Creek, Trout C
deposits are found throughout the area, primarily in esk
Agriculture is an important land use, with the majority o

Resource Management Policies

Management will be directed towards key resource site
will be promoted to provide mutual benefits to ministry
Areas with C.L.I. agricultural soil capability classes 1-3 v
Existing valuable hardwood stands in agricultural areas
Important resource areas and management


20 25 Kilometres
Miles
16
MAPLE
RA2
MARIPOSA
Mariposa Brook
LINDSAY
U
OPS
VICTORIA
Scugog R.
C
IR
Lake Scugog
SCUGOG
Nonquon R.
RA2
EMILY
Emily Cr.
Pigeon
Pigeon R.
ENNISMORE
C
DUMMER
Round Lake
Belmont Lake
DOURO
River
PETERBOROUGH
U
RA2
NORTH MONAGHAN
CAVAN
MANVERS
R2
Baxter
Cr.
OTONABEE
Indian
Ouse
River
ASPHODEL
Otonabee R.
IR
SOUTH MONAGHAN
C
RICE
LAKE
IR
C
ALNWICK
NAPANEE
R2
HALDIMAND
HAMILTON
DURHAM
WHITBY
OSHAWA
NEWCASTLE
Bowmanville Cr.
Wilmot Creek
RA1
HOPE
Ganaraska River
NORTHUMBERLAND
RA1
U
U
Port Hope
S
LAKE
ONTARIO
7
35
28
47
7A
12
115
45
2
401

R2 RURAL-OAK RIDGES MORAINE

Area Description

The Oak Ridges Moraine is recognized as one of the most distinctive physiographic features in southern Ontario. It extends from the Niagara Escarpment east to the Trent River.

The moraine is important because of the extensive areas of high potential mineral aggregate deposits, numerous licenced sand and gravel pits, the deep, productive soils suitable for tree planting, the large agreement forest properties, the diverse

The numerous tolerant hardwood woodlots and forested valley lands offer productive forest management opportunities. The area also offers excellent deer and upland wildlife habitat. Several deer winter concentration areas are located in the area. There are also several important wetlands, particularly along the Nonquon River, Mariposa Brook, Eastcross Creek, Pigeon River, Fleetwood Creek, Jackson Creek, Trout Creek and Goose Lake. Localized high potential mineral aggregate deposits are found throughout the area, primarily in esker and kame formations.

Agriculture is an important land use, with the majority of the land being of class 1-4 agricultural capability.

Resource Management Policies

Management will be directed towards key resource sites to achieve program objectives. Integrated resource management will be promoted to provide mutual benefits to ministry programs, and reduce resource use conflicts.

Areas with C.L.I. agricultural soil capability classes 1-3 will generally not be considered for ministry reforestation programs. Existing valuable hardwood stands in agricultural areas should be retained and managed intensively.

to maintaining an excellent inland warm water fishery, and habitat for waterfowl and furbearing animals. Localized areas of high potential mineral aggregates and forest resources are also found in the CORTS corridor.

Resource Management Policies

In 1982 a policy statement was jointly approved by the provincial and federal governments concerning the CORTS corridor. This ministry has the lead role in implementing 15 of the 48 CORTS policies, and a support role for the implementation of 10 of the policies.

The Lindsay District will contribute towards the objectives of the CORTS corridor by implementing the CORTS policies where appropriate.

Specific Ministry interests which will be pursued in the context of the CORTS policies include:

- protection of important fish and wildlife habitat;
- management of the Kawartha Lakes sport and commercial fishery;
- management of the three provincial parks and three candidate park areas in the corridor;
- management of other Crown properties within the corridor for public, low intensity recreation opportunities; and
- implementation of the Kawartha Development Strategy, where appropriate.

Generally, specific areas of importance to ministry programs will be managed to contribute to the ministry's objectives, promoting integrated resource management where possible.

IR INDIAN RESERVE

This area includes the Scugog Island (Scugog Township), Alderville (Alnwick Township), Curve Lake (Smith Township) and Hiawatha (Otonabee Township) Indian Reserves. Indian reserve lands were not considered in the resource analysis for the *District Land Use Guidelines.*

R1 RURAL - DUMMER MORAINE

Area Description

The Dummer Moraine is an area of rough, stony land bordering the Canadian Shield to the north and east of the Kawartha Lakes. Parts of this area are within the CORTS corridor, and are included in Area C.

The underlying bedrock is sedimentary limestone. Due to this significant bedrock formation, and other mineral aggregate deposits, mainly in eskers, the Dummer Moraine area is important to the Mineral Resources program.

The area is also important for the Fish and Wildlife program. Several deer winter concentration areas are located here, including the largest and most important concentration area in the district, the Dummer Deer Yard in Dummer Township.

The Belmont Township Lakes - Cordova, Crowe, Belmont, and Round - are important to the Fisheries program. These lakes support a warm water sport fishery. The Deer Lake Fish Hatchery is located in Belmont Township.

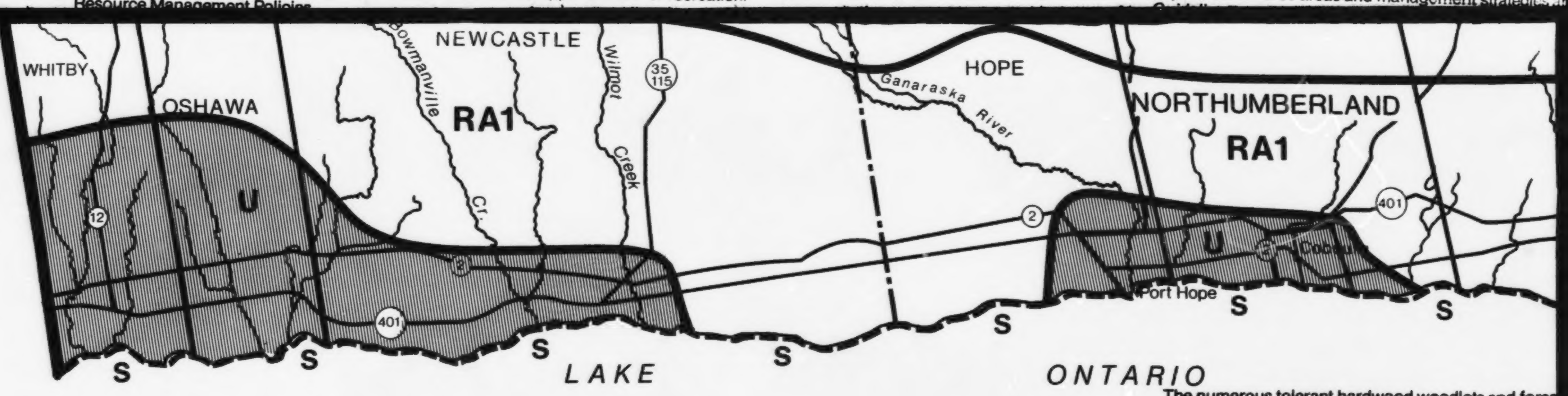
Resource Management Policies

Resource management will be directed towards important resource areas to meet district objectives. Integrated resource management will be promoted where appropriate.

Key areas for resource management include:

- Deer winter concentration areas
- Important wetlands
- Belmont Township lakes
- Deer Lake Fish Hatchery
- Cold water streams
- High potential mineral aggregate areas
- Crown land

Management strategies for these resource areas are outlined in the appropriate program strategy sections.



R2 RURAL - OAK RIDGES MORAINE

Area Description

The Oak Ridges Moraine is recognized as one of the most distinctive physiographic features in southern Ontario. It extends from the Niagara Escarpment east to the Trent River.

The moraine is important because of the extensive areas of high potential mineral aggregate deposits, numerous licenced sand and gravel pits, the deep, productive soils suitable for tree planting, the large agreement forest properties, the diverse wildlife habitats, cold water stream headwaters, and the many opportunities for recreation.

Resource Management Policies

The Oak Ridges Moraine, because of its importance to several ministry programs, will be a key area for promoting integrated resource management and the achievement of program objectives.

The ministry will ensure that each program considers the achievement of other program objectives when undertaking any project. Individual resource management plans will be prepared in consultation with other programs to ensure that important resource areas are protected from incompatible land uses, resource conflicts are minimized, and a variety of program objectives are achieved, where applicable.

Where mineral aggregate extraction occurs, sequential rehabilitation will be encouraged. Rehabilitation of licenced properties will be required upon completion of aggregate extraction.

RA1 RURAL/AGRICULTURAL - SOUTHERN SLOPE OF OAK RIDGES MORAINE

Area Description

This area includes the southern slope of the Oak Ridges Moraine and the old Lake Iroquois shoreline.

This is the headwater area for most of the cold water streams in the district, and thus is significant to the Fisheries program.

High potential mineral aggregate resources are located throughout the area, primarily along the Lake Iroquois shoreline deposits. The area is also an important forest management area, with scattered tolerant hardwood woodlots.

Agriculture is a significant land use in the area, with the majority of the land being of class 1-4 agricultural capability.

Resource Management Policies

Integrated resource management will be promoted to ensure the protection of important fish and wildlife habitat, while providing other resource benefits such as forest management and mineral resources.

Forest management projects that assist in the protection or enhancement of cold water streams and their headwaters will be given special consideration during project selection. An example is soliciting Woodlands Improvement Act (WIA) agreements in cold water stream watersheds to protect fish habitat through streambank stabilization and shading, while supplying future forest management opportunities.

Areas with C.L.I. agricultural soil capability classes 1-3 will generally not be considered for ministry reforestation programs. Existing valuable hardwood stands in agricultural areas should be retained and managed intensively.

Mineral aggregate extraction activities will be co-ordinated with other ministry programs to ensure that resource conflicts are minimized. Rehabilitation of licenced properties will be required upon completion of mining.

RA2 RURAL/AGRICULTURAL

Area Description

The area outlines the general extent of the Peterborough Drumlin Field in Lindsay District, with the exception of the portion of the field that extends into the CORTS corridor.

This area is important to the ministry for a variety of reasons.

The numerous tolerant hardwood woodlots and fores
The area also offers excellent deer and upland wildlife
area. There are also several important wetlands, partic
Pigeon River, Fleetwood Creek, Jackson Creek, Trou
deposits are found throughout the area, primarily in e
Agriculture is an important land use, with the majority

Resource Management Policies

Management will be directed towards key resource s
will be promoted to provide mutual benefits to minist
Areas with C.L.I. agricultural soil capability classes 1-
Existing valuable hardwood stands in agricultural are
Important resource areas and management strategie
Guidelines.

S SHORELINE OF LAKE ONTARIO

Area Description

Approximately 93 kilometres of Lake Ontario shorelin
Intensive urban development of the shoreline is centr
Cobourg. Elsewhere, shoreline development is prima
Several large wetlands are located along the shorelin
Darlington Marsh, and Lower Wilmot Creek Marsh. T
of the wetlands, such as Oshawa Second Marsh, are
susceptible to erosion. The coastal zone atlas prepar
areas where shoreline erosion is a potential hazard to
There are no designated ministry access points on La
adequate public access to the Lake through the muni

Resource Management Policies

The ministry will seek the protection of important sho
value through the municipal planning process.
The ministry will attempt to ensure that natural hazar
proposals.
The ministry will administer the *Public Lands Act*, the
procedures to control commercial and private water l
shoreline work.

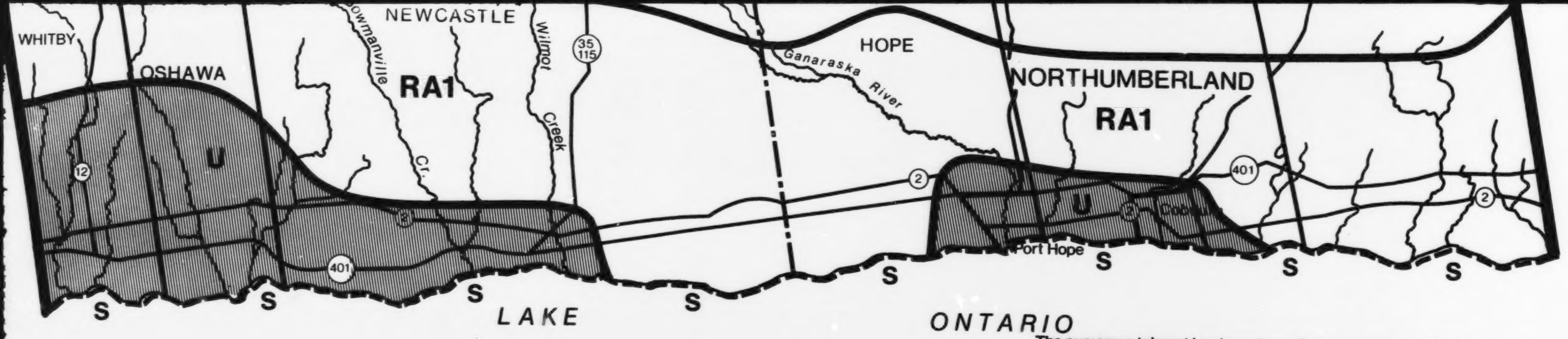
U URBAN AND URBANIZING

Area Description

This area includes the main urban and urbanizing are
Cobourg areas, the City of Peterborough, and the To
Ontario shoreline. Major marshes and wetlands such
important to the Fish and Wildlife program.

Resource Management Policies

Urban development will limit the potential for resourc
resource areas in urban and urbanizing areas have b
conflicting land uses these areas cannot be consider
The ministry will seek to ensure that important resou
scientific interest, and other ministry concerns such



R2 RURAL-OAK RIDGES MORAINE

Area Description

The Oak Ridges Moraine is recognized as one of the most distinctive physiographic features in southern Ontario. It extends from the Niagara Escarpment east to the Trent River.

The moraine is important because of the extensive areas of high potential mineral aggregate deposits, numerous licenced sand and gravel pits, the deep, productive soils suitable for tree planting, the large agreement forest properties, the diverse wildlife habitats, cold water stream headwaters, and the many opportunities for recreation.

Resource Management Policies

The Oak Ridges Moraine, because of its importance to several ministry programs, will be a key area for promoting integrated resource management and the achievement of program objectives.

The ministry will ensure that each program considers the achievement of other program objectives when undertaking any project. Individual resource management plans will be prepared in consultation with other programs to ensure that important resource areas are protected from incompatible land uses, resource conflicts are minimized, and a variety of program objectives are achieved, where applicable.

Where mineral aggregate extraction occurs, sequential rehabilitation will be encouraged. Rehabilitation of licenced properties will be required upon completion of aggregate extraction.

RA1 RURAL/AGRICULTURAL-SOUTHERN SLOPE OF OAK RIDGES MORAINE

Area Description

This area includes the southern slope of the Oak Ridges Moraine and the old Lake Iroquois shoreline.

This is the headwater area for most of the cold water streams in the district, and thus is significant to the Fisheries program. High potential mineral aggregate resources are located throughout the area, primarily along the Lake Iroquois shoreline deposits. The area is also an important forest management area, with scattered tolerant hardwood woodlots.

Agriculture is a significant land use in the area, with the majority of the land being of class 1-4 agricultural capability.

Resource Management Policies

Integrated resource management will be promoted to ensure the protection of important fish and wildlife habitat, while providing other resource benefits such as forest management and mineral resources.

Forest management projects that assist in the protection or enhancement of cold water streams and their headwaters will be given special consideration during project selection. An example is soliciting Woodlands Improvement Act (WIA) agreements in cold water stream watersheds to protect fish habitat through streambank stabilization and shading, while supplying future forest management opportunities.

Areas with C.L.I. agricultural soil capability classes 1-3 will generally not be considered for ministry reforestation programs. Existing valuable hardwood stands in agricultural areas should be retained and managed intensively.

Mineral aggregate extraction activities will be co-ordinated with other ministry programs to ensure that resource conflicts are minimized. Rehabilitation of licenced properties will be required upon completion of mining.

RA2 RURAL/AGRICULTURAL

Area Description

The area outlines the general extent of the Peterborough Drumlin Field in Lindsay District, with the exception of the portion of the field that extends into the CORTS corridor.

This area is important to the ministry for a variety of reasons.

The numerous tolerant hardwood woodlots and forested valley lands offer productive forest management opportunities. The area also offers excellent deer and upland wildlife habitat. Several deer winter concentration areas are located in the area. There are also several important wetlands, particularly along the Nonquon River, Mariposa Brook, Eastcross Creek, Pigeon River, Fleetwood Creek, Jackson Creek, Trout Creek and Goose Lake. Localized high potential mineral aggregate deposits are found throughout the area, primarily in esker and kame formations.

Agriculture is an important land use, with the majority of the land being of class 1-4 agricultural capability.

Resource Management Policies

Management will be directed towards key resource sites to achieve program objectives. Integrated resource management will be promoted to provide mutual benefits to ministry programs, and reduce resource use conflicts.

Areas with C.L.I. agricultural soil capability classes 1-3 will generally not be considered for ministry reforestation programs. Existing valuable hardwood stands in agricultural areas should be retained and managed intensively.

Important resource areas and management strategies are identified in the program sections of the district *Land Use Guidelines*.

S SHORELINE OF LAKE ONTARIO

Area Description

Approximately 93 kilometres of Lake Ontario shoreline is in Lindsay District.

Intensive urban development of the shoreline is centred on the Whitby-Oshawa-Newcastle area, and at Port Hope and Cobourg. Elsewhere, shoreline development is primarily low density residential

Several large wetlands are located along the shoreline, such as the Oshawa Second Marsh, Lynde Creek Marsh, Port Darlington Marsh, and Lower Wilmot Creek Marsh. These lakeshore marshes are important fish and wildlife habitat. Some of the wetlands, such as Oshawa Second Marsh, are also within urban and urbanizing areas. Much of the shoreline is susceptible to erosion. The coastal zone atlas prepared for the Canada-Ontario Great Lakes Shore Damage Survey outlines areas where shoreline erosion is a potential hazard to existing or proposed development.

There are no designated ministry access points on Lake Ontario in Lindsay District. Generally, the ministry encourages adequate public access to the Lake through the municipal planning process.

Resource Management Policies

The ministry will seek the protection of important shoreline wetlands, and will encourage municipalities to recognize their value through the municipal planning process.

The ministry will attempt to ensure that natural hazards, such as erosion and flooding, are considered in new development proposals.

The ministry will administer the *Public Lands Act*, the *Lakes and Rivers Improvement Act*, and existing policies and procedures to control commercial and private water lots, lakeshore protection works, dredging and filling, and other shoreline work.

U URBAN AND URBANIZING

Area Description

This area includes the main urban and urbanizing areas in the district: the Whitby-Oshawa-Newcastle and Port Hope-Cobourg areas, the City of Peterborough, and the Town of Lindsay. Significant resource values are associated with the Lake Ontario shoreline. Major marshes and wetlands such as the Oshawa Second Marsh and LeVay's (Cranberry) Marsh are important to the Fish and Wildlife program.

Resource Management Policies

Urban development will limit the potential for resource management in this area. Most mineral aggregate and forest resource areas in urban and urbanizing areas have been removed from the program strategy maps. Due to potentially conflicting land uses these areas cannot be considered to have high potential for resource management.

The ministry will seek to ensure that important resource areas, such as wetlands, watercourses, areas of natural and scientific interest, and other ministry concerns such as hazard lands, are considered in the municipal planning process.

POOR

QUALITY

ORIGINAL